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MEMOIRS

OF THE

PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND ETHNOLOGY, HARVARD UNIVERSITY

VOL. I—No. 6

THE HIEROGLYPHIC STAIRWAY

RUINS OF COPAN

REPORT ON EXPLORATIONS BY THE MUSEUM

BY

GEORGE BYRON GORDON

CAMBRIDGE

PUBLISHED BY THE MUSEUM

1902

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MEMOIRS

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EDITORIAL NOTE.

THE Hieroglyphic Stairway on the side of one of the great pyramidal structures of the ruins of Copan has excited special interest from the time of the first account of the ruins given by Palacio in 1570. When our second expedition, under the lamented Owens, began the work of clearing the débris from the steps, the importance of the stairway, particularly on account of the hieroglyphic inscription, was fully realized. From that time the successive expeditions have worked at the stairway until it has been the good fortune of Mr. Gordon to complete its examination and to make photographs and moulds of the sculptured faces of the steps.

It is greatly to be regretted that an earthquake, or possibly the gradual disintegration of the sustaining structure, had caused the upper part of this impressive stairway to slide down over the lower portion, thus displacing the upper steps and throwing them out of their original position. The sequence of the greater part of the inscription upon the front of the steps is thus lost. Mr. Gordon has done all that could be done to match the stones of this disturbed portion, as shown by the photographs and drawings accompanying this memoir. The inscription is made the subject of his researches in the second part of the memoir.

Moulds of all the hieroglyphs and sculptures on the stairway have been made during the several expeditions, and when room is provided in the Museum for the exhibition of the casts in their proper sequence, the wonderful Hieroglyphic Stairway will prove a most interesting object for study.

The antiquity of Copan becomes impressive in view of Mr. Gordon's deductions that this stairway bears an inscription over seven hundred years later than any other inscription, yet found on the monuments of this ancient city, the initial date of which has been determined.

This number completes the first volume of the Museum Memoirs. The expenses of publishing this memoir and of the last expedition have been defrayed by the annual subscriptions to the Central American Fund.

F. W. PUTNAM,
Curator of the Museum.

HARVARD UNIVERSITY,
DECEMBER, 1901.

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THE HIEROGLYPHIC STAIRWAY
RUINS OF COPAN

ARCHITECTURE.

On the extreme northern end of the Main Structure at Copan, rising to a height of about eighty-five feet above the Great Plaza which extends from its base northward, is the pyramidal foundation No. 26.* On its southern side it is attached to the great pile of which it forms a sort of wing, while the northern and eastern sides rise in terraces which were probably seven feet high, five feet broad, and faced with neatly cut oblong blocks of stone; the top of each forming a smooth firm floor of mortar cement (Fig. 1). These terraces have nearly all fallen, exposing the interior of the structure, which consists of rough blocks of stone and clay firmly packed together. On the east side there is nothing to indicate that this falling away of the terraces was due to other agencies than the growth of trees and the pressure of the material fallen from above which caused a gradual disintegration of the outer casing. On the northern side, however, there has been a landslide by which the whole of that side, except the very lower part, was scooped out and the débris piled on the bottom of the slope and on the plaza. At the time of the arrival of the first expedition, in 1891, the whole structure was covered with heavy timber trees, some of them very large. In its present

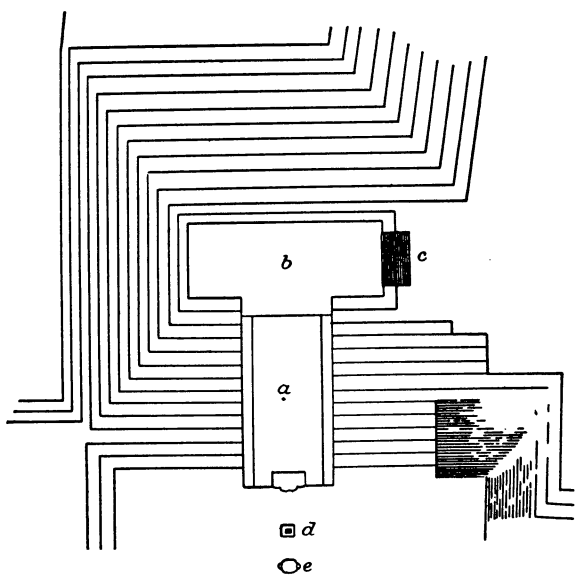

Fig. 1. — Plan of Mound 26, restored.

a, Hieroglyphic Stairway. *b*, Platform on which the Temple stood. *c*, Flight of Plain Steps leading to Temple from Elevation on South Side. *d*, Stela M. *e*, Altar M.

* See Memoirs Peabody Museum, Vol. I, No. 1, for plan of the Main Structure.

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condition the pyramid rises almost to a point, leaving apparently but little space on top for a building; but as the top has been reduced in size by landslides, and building stones as well as sculptures were found overlying the slopes and the level ground below, there is every reason to believe that a building of some sort once stood there, though not a trace of it remains in position, not even of the foundations (Plate I).

The western side of this pyramidal structure presents the ruins of the greatest architectural feature that has yet come to our knowledge at Copan, — the Hieroglyphic Stairway.

Stephens,* although he refers to this slope and speaks of quantities of sculptures, does not mention any stairway. He mentions "rows of death's heads" and the "trunk of a colossal ape," from which it is evident that he has confused two localities in his description. The death's heads, one of which he figures on page 135 of Vol. I, are on the western slope of Mound 16 and not on Mound 26.

Maudslay, who was the first to direct attention to the stairway and to the excellence of its design and workmanship and who gave it the name by which it has since become known, ascertained, by means of excavations in the summit of the mound, that no portion of a building remained on that elevation. He rightly concluded, however, that a building once stood there. A fragment of the inscription on the steps is figured on page 32 of his text.†

As has already been mentioned, the north side of this same pyramid has been destroyed by a landslide; so on this western side also, where the stairway ran from the base to the summit, a similar accident has taken place. The whole upper part of the stairway from the top to more than halfway down was thrown from its place, and, together with a large quantity of the filling underneath, was precipitated to the bottom, covering the lower steps, which still remained in position, with a heap of débris, burying them to a depth of twelve feet and completely hiding them from view. In this downward journey fifteen only of the displaced steps retained to some degree their identity and relative positions, the topmost of these coming to rest at about fifty-six feet from the ground below. These are the steps that Maudslay described and which he believed to be in position.

It is impossible to tell from actual conditions at what time in the history of the city these landslides took place. The localities where they occurred were well wooded in 1891; but the growth of trees in that climate is of little value in determining lapse of time. There are a few historical references, however, that, if they are worth anything at all, would seem to indicate that these accidents took place in comparatively recent times.

* Incidents of Travel in Central America.

† Compare Plate XII of the present Memoir, G, 1st block. The drawing on page 16 of Maudslay's work (Biologia Centrali Americana; Archaeology) represents the opposite side of the sculpture shown on Plate 9, *b* (Maudslay), and not part of a step of the Hieroglyphic Stairway as it is labelled.

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Palacio, in his letter to the King of Spain (1570), spoke of "a grand stairway descending by a great number of steps to the river." * At the present day there is no stairway whatever on that side of the structure next the river, nor is there any sign of one having existed. It is true that this side has been entirely destroyed by the river, but this had been accomplished at least in part at the time of Palacio's visit, and while a great stairway may at that time have existed on the river side, the absence of any evidence leads to the suggestion that Palacio may have meant the Hieroglyphic Stairway, the only one corresponding to his description that has come under our observation. If so, it must have been at that time entire, reaching from the plaza to the summit of the pyramidal structure, for in its later condition after the landslide, in which condition Stephens failed to notice it, although he described adjacent monuments, it could hardly have elicited the comment of Palacio already quoted.

Furthermore, in 1854 the German traveller Dr. Carl Scherzer was on his way to visit the ruins, but having arrived at Santa Rosa, he was warned by the padre and others against proceeding on a journey so dangerous to life and property. He has recorded that the padre at Santa Rosa informed him that "a recent landslip had much injured the effect of the ruins." †

Now, the two landslides just described are the only ones of which I have any knowledge at Copan, and the one by which the Hieroglyphic Stairway was destroyed is the only one that has materially injured the effect of the ruins. Before its destruction the Hieroglyphic Stairway was probably the feature that most of all attracted the attention and excited the wonder of the natives, and it is not surprising that the padre said the landslide had spoiled the effect of the ruins. The priest spoke (in 1854) of the landslide as recent, but the stairway must have been thrown down before the time of Stephens' visit (in 1840), as otherwise it would hardly have escaped his notice.

In December, 1892, Mr. Owens, supposing the steps which were then visible on the slope to be a stairway in position, began clearing them of the débris that partly hid them, but found that they stopped suddenly some distance from the bottom of the slope. Here he began to dig, and encountered a confused mass of broken sculptures.

At this stage of the work Owens left the ruins on the journey that proved to be his last. After his return he was anxious to have the excavation continued, though unable to superintend it himself on account of his illness; and the survey that I was engaged in making was suspended that this work might be carried on. During this time the altar and bottom steps were reached, and Owens made an attempt to inspect the

* See Memoirs Peabody Museum, Vol. I, No. 1, for the part of Palacio's letter which refers to Copan.

† Travels in the Free States of Nicaragua, Honduras, and Salvador, Vol. II, p. 95.

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work, but his strength failed before he reached the site and he had to be assisted back to his cot, from which he never rose. We have not therefore the benefit of his mature opinion respecting the evidence of a landslide. I feel sure, however, that had he lived to weigh the evidence there would have been no doubt of it in his mind. Following are given in full the few brief notes left by Owens respecting the stairway: —

"Field notes on the excavation of Mound 26: — A few workmen were put clearing what is known as the Hieroglyphic Stairway for the purpose of taking moulds of the best sculptures. In a few hours they had uncovered so many nice pieces of sculpture that I considered it worth while to continue work in that place.

"For several days the work has been going on, and we have found a good many fine pieces of workmanship. At the bottom of the stairs sculptured stones were found below what must have been the line of the steps when in position. A few of the surfaces show signs of burning. To-day, Dec. 28th, we found a fine head and later part of the bust of what must have been a very fine figure [Plate XIV]. The decoration is much like Stela I. The decoration of the shoulders is exceedingly fine. But more odd is a death's head much destroyed across the breast. This is the first and only case of this kind that I have seen in the ruins.

"Dec. 29 & 30. Work was continued on this mound, and many fine pieces of sculpture were encountered, many of them surely below the line of the steps. It would seem as though the steps had been built up on these. To-day, 30th, another torso [shoulders with death's head on breastplate, Plate XV] was found with a death's head exactly like the one mentioned above.

"Jan. 5th. During the present week work has been continued on the mound and we have removed many fine sculptures from the region of the stairway. One very interesting piece resembles a rattlesnake [Plate XIII, A]."

Here the notes stop abruptly. From the time that I took charge of the excavation until within a few days of Owens' death, when the work was stopped, many sculptures were removed, mostly loose blocks from the broken steps. A view of the stairway as it appeared when work was discontinued is given in No. 1 of this volume of Memoirs (Plate V, Fig. 1).

Should it be asked what is the nature of the evidence pointing to the occurrence of a landslide, and how it can be proved that one stairway was not built upon the other, it may be answered that the general condition of things pointed unmistakably to a landslide (Fig. 2).

The sculptures removed during the excavation were, for the most part, of a fragmentary nature. In some cases several parts of a figure or other object were found and fitted together, as in the statue shown on Plate XIV and the coiled serpents on Plate XIII, A, but in the great majority of cases only mere fragments were found. The remaining portions must either have been ground to powder by the landslide or have been reduced by disintegration to unrecognizable shapes. A large proportion of the sculptures removed from this mass of débris consisted of blocks

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which had once formed parts of steps, their relative positions no longer preserved. In many instances it is possible to recognize blocks which occupied adjacent positions in the stairway by correspondence of lines; but where the carving is indistinct or the joint falls on a blank space, the blocks will have to remain in their disorganized condition until some other method shall have been devised for their restoration.

The excavation of the stairway was resumed in 1895. The steps that had been carried down bodily by the landslide and still occupied the middle of the slope were lowered down block by block and arranged in their proper relative positions on the level floor of the plaza, in which position photographs and moulds were made of the carvings on their faces (Plates II and V).

Few of these steps are complete, blocks are missing from the ends or from other parts, and the carvings, having been exposed to the weather and to the impact of loose stones falling from the upper part of the slope, are much damaged. Many of the characters are so indistinct that they can be identified only by careful comparison with others, if at all, while many more are among the best and most perfect examples of hieroglyphic carving at Copan. It was not until 1899 that the final work of excavation was done and the lower part of the stairway cleared. It was found that only ten entire steps remain in position. The next two steps are almost complete, while portions of three more retain their places, making in all fifteen steps with hieroglyphs, that are not entirely displaced. This does not include the lowest step of all, which is lower in the rise and wider in the tread than the others and without hieroglyphs (Plates III and IV).

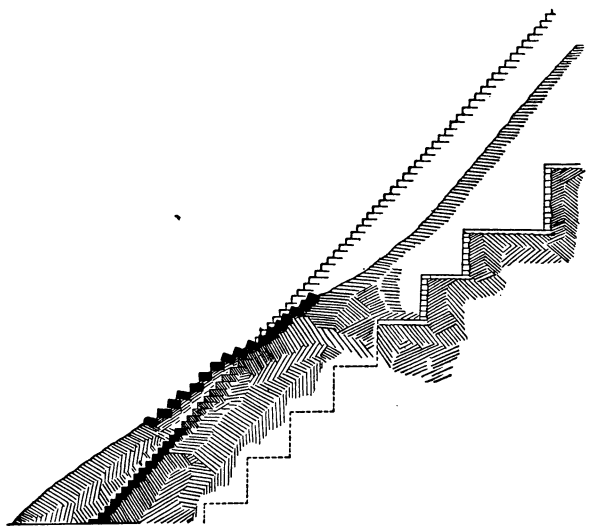

FIG. 2. — CROSS SECTION THROUGH WESTERN SIDE OF MOUND 26, SHOWING LANDSLIDE, STEPS IN POSITION, AND TERRACES IN THE INTERIOR OF THE MOUND.

A large altar (Plates VII, VIII, and IX), built into the stairway at the base, rises to the level of the top of the fourth step (not counting the first step). This altar was very elaborately carved over the entire surface, which however was very badly defaced when uncovered, much of the carving being entirely destroyed. The top of this altar consists of four large slabs let into the steps (Figs. 3 and 4). A photograph of a cast of the upper surface is shown on Plate XI. The carving here, being directly exposed to the

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action of the weather and to the impact of loose stones falling down the slope before the landslide took place, is so worn that I am unable to make much out of it, but there seems to have been an elaborate grouping of human figures and other objects, as well as a number of hieroglyphs. The

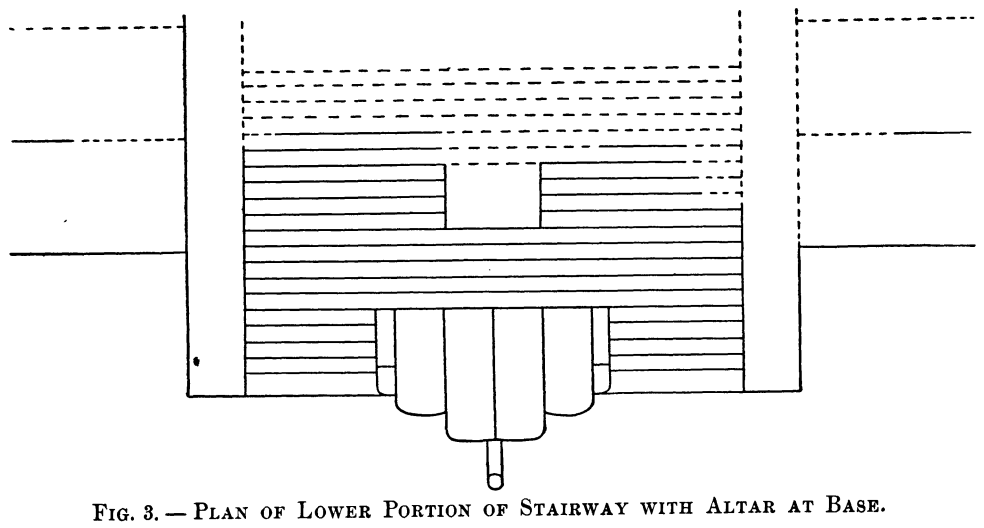

FIG. 3. — PLAN OF LOWER PORTION OF STAIRWAY WITH ALTAR AT BASE.

whole design of the altar seems to have been meant for a huge serpent's head, and it is probable that the stairway itself represented the body of a great serpent.

Immediately above the altar, at the height of five steps, is a large seated figure built of three pieces of stone and let into the centre of the stairway. The figure is arrayed in the usual elaborate adornment. The enormous headdress represents the upper part of the head of some animal, the lower jaw of which extends across the breast in the form of a breastplate; a great shield rests on the left shoulder, hiding that arm and hand; the right arm is extended outward and forward, and the hand formerly held some object which has been broken away. The projecting snout of the animal in the headdress had been broken off and was found in 1900 among a heap of fragments on the plaza below. It had evidently been exposed to the weather a long time, but apart from being stained nearly black it showed no more weathering than the remainder of the head.

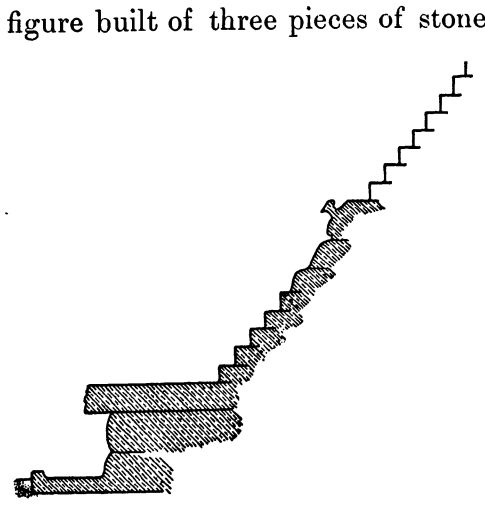

FIG. 4. — CROSS SECTION THROUGH LOWER PORTION OF STAIRWAY.

In the centre of step M (Plate V) may be seen the lower portion of a similar figure, while the steps immediately above this are plain where the

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figure had been built up against them or let in. Only a few small fragments of the upper portion of this figure were found among the débris.

During the excavation in 1893 another similar figure was removed from the débris buried beneath the landslide, near the median line of the stairway (Plate XIV and Fig. 5). Besides these three figures, portions of two other similar ones were found among the débris, showing that there were not less than five of these figures placed at intervals in the centre of the stairway. It is probable that the altar already mentioned bore the same relation to all these figures that the altars in front of the stelæ bore to the corresponding statues.

The stairway was guarded on either side by a sort of balustrade, now almost entirely destroyed, built on a line corresponding to the outer corners of the steps. The sloping surface of this structure was decorated by the serpent and bird symbols alternating in the ascent; the one in profile and the other in front view. The latter extended across the balustrade and projected one foot beyond the outer surface, the ends being rounded downward. All the stones in these side structures were cut with bevel faces. The portions farthest from the steps in the intervals between the bird ornaments were lower by about four inches than the rest, and were constructed of plain stones, but it is not unlikely that these stones were covered by stucco which may have been modelled (Fig. 6).

The whole stairway projects seven feet six inches in front of the terraces which form the casing of the mound on either side of it. The measurements made are as follows:—

Entire width of stairway not including the balustrades	26′ 2″
Width of each balustrade	3′ 6″
Width of altar across top	10′ 6″
Width of altar, bottom	12′ 2″
Altar top projects in front of step	7′ 0″
Height of altar	5′ 0″

The plaza in front of the stairway was paved with a thick layer of mortar cement laid over broken stone. This pavement remains entire for a distance of ten or fifteen feet in front of the stairway; beyond that it is broken up. There was a sort of turned up nose or tongue which projected from the centre of the altar on a level with the pavement for a distance of four feet; this upturned portion is broken off six inches above the pavement, leaving doubtful the manner in which it ended.

The entire slope from the base of the stairway to the top of the mound measures one hundred and twenty-five feet, while the portion remaining in position measures twenty-five feet, or one-fifth of the whole distance. Estimating in this way, the whole number of steps in the stairway when entire would be eighty (Plate XVIII). It is probable that the foundations of the edifice which we have inferred stood upon the summit were at a slightly

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greater elevation than the present summit, the height having been reduced somewhat, it would appear, by gradual falling away as well as by the landslides. The steps average nearly one foot in height, and the present height of the mound (eighty-five feet) would require about eighty-five steps of the same average height to reach to the top. If we suppose the height of the mound to have

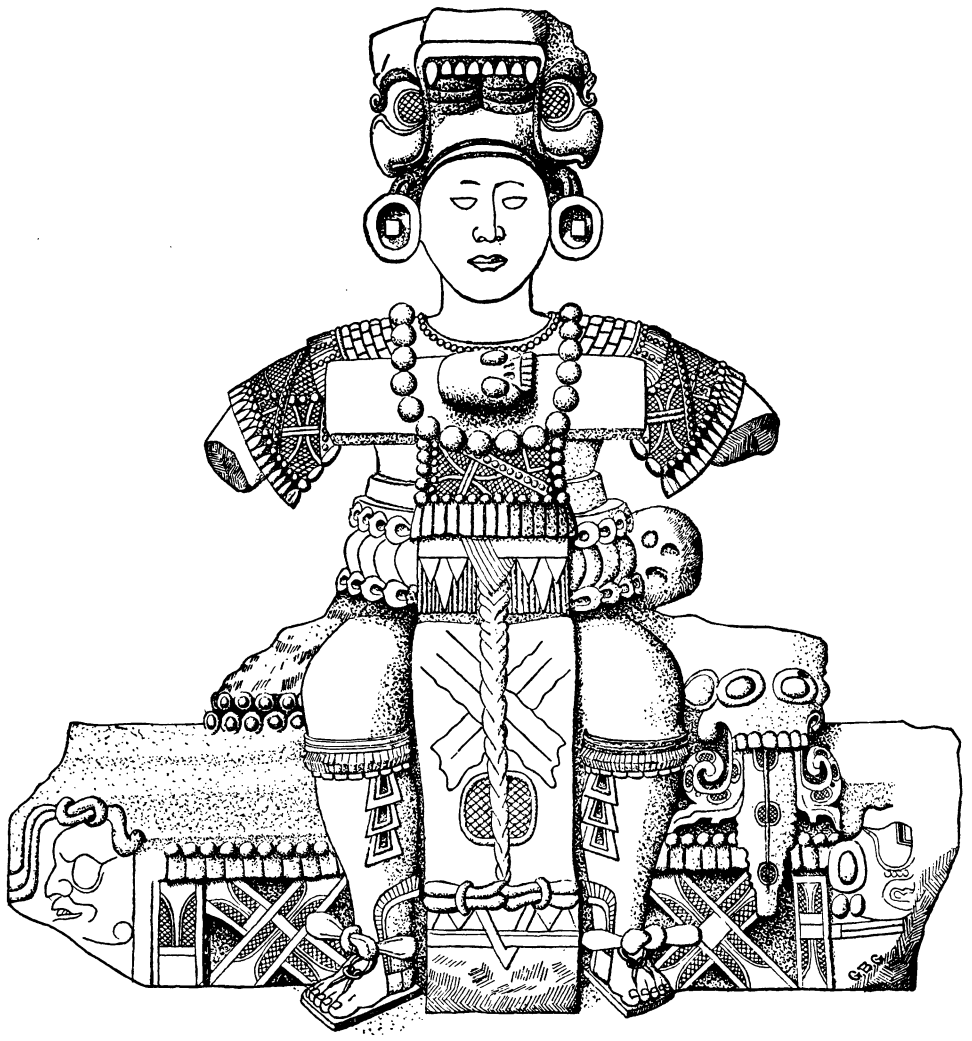

FIG. 5. — DRAWING OF ONE OF THE SEATED FIGURES, PARTLY RESTORED.
From the original sculpture.

been reduced five feet, which does not seem improbable, this would bring the number of steps up to ninety. The ornament on the balustrades which I have called a bird symbol, probably continued alternating with the serpent's jaws all the way up. This ornament was always carved on a single stone, unlike the serpent with which it is associated, which was always constructed of several stones fitted together, and for that reason was more easily lost or destroyed. Only one of these bird symbols remained in position. It was

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on the left side of the stairway, and with it in position were portions of two serpent symbols, one above and one below. Among the débris removed during excavation were a great many portions of similar serpent ornaments, but most were badly broken. Of the bird ornaments, I counted thirty, many of which were entire. It is altogether probable that several of these were lost, one cannot tell how many, but the count of thirty would leave

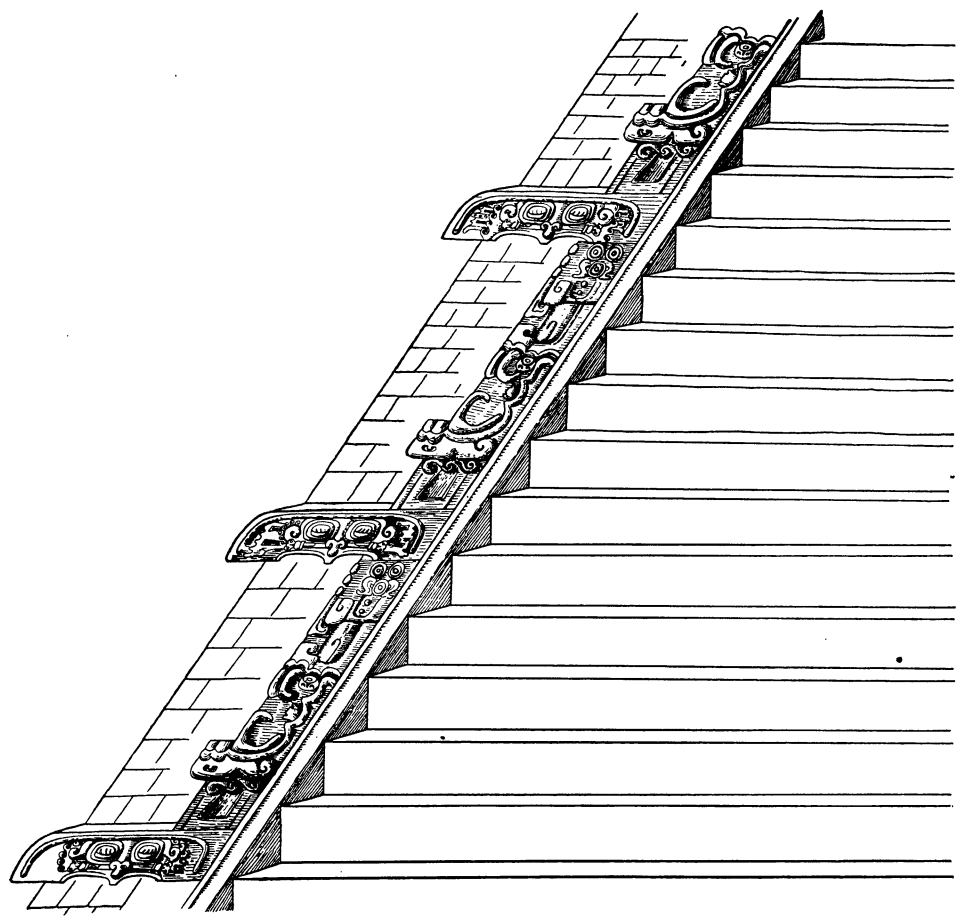

FIG. 6. — DETAILS OF BALUSTRADE. RESTORATION.

fifteen on a side, and as there are about five steps to each of these ornaments, according to the most careful measurements that could be obtained, this would bring the number of steps in the stairway up to seventy-five; but since we cannot tell how many of these ornaments were totally lost, this is as far as the estimate will take us. In any case the number of steps originally in the stairway was not less than eighty-five, and possibly amounted to upward of ninety, whereas the total number which we are able to reproduce is only twenty-seven, and many of these have large portions missing, and they are not continuous, but in two separate sets.

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On all the lower steps that are complete and on which the glyphs are continuous from one end to the other, there are twenty squares or glyphs; but this system would not seem to have been adhered to throughout, and the squares do not fall in columns, and as will appear must be read in lines along the steps. The regular lines of squares are interrupted not only by the large seated figures in the centre but by reclining figures, which sometimes occupy the centre, but in other instances occupy different positions. The crouching figure in the centre of steps E and F (Plate V), of which a drawing is shown in Fig. 7, is the only one of the kind encountered. This curious sculpture is difficult to understand, and unfortunately it is rather badly worn. It represents a figure about life size, sitting cross-legged, with the body bent toward the right. The extended right hand grasps what seems to be the fish that is usually attached to what Maudslay calls the water-plant, on the flower of which the fish, wherever it occurs, seems to be feeding. The animal here shown very closely resembles this fish, as usually represented, as, for instance, on Stela N at Copan and on pottery figures found in Vera Paz.* If this be the right understanding of the sculpture, the fish has in this instance swallowed the flower of the water-plant, the stem of which protrudes from the open mouth and disappears behind the crouching figure. The object resting on the left knee of this figure is not unlike parts of the water plant.

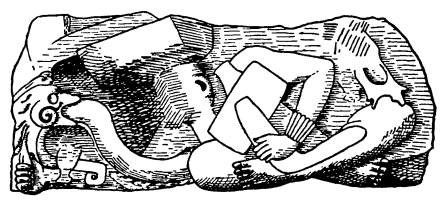

FIG. 7. — CROUCHING FIGURE IN CENTRE OF STEPS E AND F, PLATE V.

Immediately below this on the next step is a reclining figure which occurs again on step H (Plate VI). Each of these figures occupies the central portion of a step, and on step D and on step J (Plate V) the squares are again interrupted by reclining figures. Other figures of this sort may be seen on Plate XII, where they appear on loose blocks which formed parts of steps. It is doubtful whether all or any of these figures are intended to represent persons in a reclining attitude. They rather create the impression of persons standing upright, and that the apparent attitude was adopted by the artists in order to conform to the face of the step. It may be stated that all the portions of steps on which the glyphs are at all distinct are reproduced in this memoir; there are many others on which the hieroglyphs are quite illegible and are indicated only by the outlines of the squares. The greater part of the missing steps and inscription is irretrievably lost. Altogether what remains of the Hieroglyphic Stairway is scarcely more than a fragment. Of the inscription with which it was decorated, the longest hieroglyphic inscription that has

* For illustrations of the various examples of the water plant, see Maudslay, Vol. IV, Plates 92 and 93.

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yet come to light among the Maya ruins, only broken fragments remain; the greater part is lost beyond hope of recovery.

Of the temple, or other edifice, to which this great stairway was the approach, next to nothing can be said. The fragments of sculpture overlying the slopes and mingled with the ruins of the stairway show that it possessed features of great artistic merit. Doubtless it was one of the most striking edifices at Copan, and at first thought it seems strange that nothing should have remained of it; but the height of the pyramidal foundation on which it stood and the steepness of the slopes made its position rather insecure, while the landslides must have contributed greatly to its ultimate destruction.

There was another approach to this building from the south by a flight of plain steps leading up from the level terrace just west of Temple 22 (see plan, Fig. 1). Seen from this elevation, the Hieroglyphic Stairway, with the temple above it, must have presented a most striking appearance. Certainly no more impressive spectacle was offered by the architecture of Copan, and probably nowhere in all ancient America could be found anything to compare with it. The stone from which it was built was the same as that from which the stelæ are carved (trachyte), and seems to have been carefully selected with regard to fineness and uniformity of color. Those parts that had been long exposed had become stained by the vegetation, but when the base of the stairway was uncovered and washed free of adhering clay, the stone presented a bright fresh surface, of uniform color, a light delicate shade of green, which was very effective.

In the plan of Mound 26, shown in Fig. 1, an attempt is made to restore its lines and show the platform on top which probably supported the temple. Most of the terraces here represented are destroyed. On the north side portions of three only remain, the lower ones, and in the restoration the measurements of these are adopted; on the east side a number of the terraces were found intact near the inner angle, and the measurements obtained of these have been used for the reconstruction of the terraces on that side. On the western slope at either side of the stairway, all the terraces are destroyed, with the exception of portions of the lowest, and a smaller fragment of the second, and it has been assumed that those above were uniform with these.

An excavation was made by Maudslay in the western side of the mound just above the flight of steps carried down by the landslide and at that time resting on the slope. In this excavation three terraces were brought to light, the lower one, seven feet high and six feet broad, the next seven feet high and twelve feet broad and the upper one ten feet high (see Fig. 2). There is no doubt other terraces exist, both above and below these. Maudslay expresses the opinion that these, as well as similar

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walls exposed on the river front, were incorporated in the structures to strengthen them and guard against landslides. It now seems certain, however, that these interior walls and terraces are the remains of older structures or the foundations of older buildings, and indicate either a destruction of the city at some earlier period of its history, or else a practice which prevailed among the builders of erecting their later and more pretentious works as it were on top of the earlier ones. Wherever excavations have been made at Copan in the foundations of structures and even below the level of the Great Plaza, the remains of older walls and terraces and pavements have been found, and certainly the whole of the Main Structure is built over the remains of older structures; and in some parts at least these older works occur not in one layer only, but in several distinct layers, corresponding to different building periods.

In line with the centre of the Hieroglyphic Stairway and at a distance of fifteen feet in front of it stood Stela M, one of the most elaborately and delicately carved of all the stelæ at Copan. This stela and its altar are so associated with the stairway that a description of them will be given in this connection. Stela M is now fallen and broken, and nearly all of its intricate sculpture has been destroyed, only a few fragments of its elaborate scrolls and of the little figures with which its edges were adorned remain to show the character of the sculpture; while a number of small fragments of beautiful carving lie scattered about, too minute to furnish material for the restoration of the design. On the front, the side farthest from the stairway, was the usual human figure now largely effaced, and on the opposite side facing the stairway was a hieroglyphic inscription, a drawing of which is given by Maudslay on Plate 74 of his series. The height of this monument is ten feet, and its width two feet six inches (Plate XVI).

The flat slab which served as a pedestal for the monument is still in place, as well as the oblong blocks which supported it at the four sides. The two pieces of the fallen stela were removed a short distance to the right, in 1900, while the stairway was being cleared and photographed; afterward I attempted, by means of pulleys and shear legs, to replace it on its pedestal standing in its original position, but much to my regret the blocks were not strong enough, and the tackle with which I was trying to hoist the upper portion into position collapsed, and I gave up the attempt.

At a distance of ten feet in front of Stela M is the altar corresponding to it and known as Altar M. Maudslay describes this altar as follows:

"Within a few feet of Stela M is an altar which may be roughly described as a square-shaped block of stone fashioned into the form of a four-legged grotesque animal without a head. In the flat surface both on the front and back of the monument, there is a large hole and it seems probable that into these holes heads had formerly been fitted. The animal represented may have been the double-headed dragon[164] . . .

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"Close to this altar a stone head was found with a tenon attached, which fitted fairly well into the hole in the front of the altar. The head is shown in this position in the photograph. There is a four-lobed mark on the forehead as well as the peculiar marks . . . usually found in connection with one of the heads of the two-headed dragon. The photograph is not sufficiently good to show the hole in the back of the altar into which, if the suggestion made be correct, the second head of the dragon would have been fitted."

The suggestion is undoubtedly correct. Not only would the head, which Maudslay mentions and of which he gives a photograph showing it in place on the southern end of the altar on Plate 75 of his series, seem beyond doubt to belong here, but the other head has been identified and replaced in its original position on the northern end of the altar. This head was mentioned by Stephens and a drawing of it is given on page 136 of Vol. I of his work. His description is as follows: "Among the fragments lying on the ground near this place is a remarkable portrait. It is probably the portrait of some king, chieftain, or sage. The mouth is injured, and part of the ornament over the wreath that crowns the head. The expression is noble and severe, and the whole character shows a close imitation of nature."

The "portrait" is held in the open jaws of the dragon.

This sculpture was found lying among a mass of fragments about a dozen yards from the altar in 1900. The tenon attached to the back had been broken off, but a portion remained, and a trial showed that it fitted fairly well into the hole in the altar; also the plain surface on that end of the altar corresponded, in dimensions, with the back of the head (see Plate XVII). The altar thus appears complete, and represents the double-headed dragon, the "long-nosed head" being on the northern end and the "short-nosed head" on the southern end.

Among the ornaments pertaining to the stairway one of the most remarkable is a pair of serpents with interlocking coils (Plate XIII, A and Fig. 8). This sculpture was found well underneath the landslip, and the inference would be that it had occupied a position on the stairway somewhere between the two sections shown on Plates V and VI. It is only a fragment found in three pieces, and although these are in an excellent state of preservation, large portions of the ornament seemed to have disappeared.

Two rattlesnakes are represented with their tails in opposite directions. The rear ends of the bodies form a pair of interlocking loops placed horizontally. After this the bodies turn downward, but here a portion is missing. The snakes are stretched upon a groundwork of plumes, doubtless those of the quetzal, and these feathers seem to spring from a common centre, a circumstance which suggests at once that the ornament formed part of a great headdress. Each of the seated figures would seem to have been provided with a great plume upon the headgear. These plumes took different shapes. Plate XIII, F is a side view of a curved plume measuring three feet across

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from the spring of the feathers to the tips. Plate XIII, G is a top view of another great plume which forms a right angle sixteen inches above the point where it was attached to the headdress and extends backward a distance of three feet. On Plate XV is shown another plume in side view. It is somewhat smaller than those already mentioned, but the graceful sweep of the plumage is particularly well illustrated in this example. Beside it on Plate XV is shown a front view of another similar plume of more slender dimensions. The fragment, Fig. 8, measures seven feet horizontally.

FIG. 8. — SERPENT ORNAMENT, PARTLY RESTORED.
Compare Plate XIII, A.

There is no doubt that the rattlesnake plume rose above and completed the headdress on the figure seen in Plates VI and X. The serpent heads seen on either side of the monstrous jaws forming the headpiece of that figure are the heads of the rattlesnakes on the plume. A portion of the body of one of these snakes can be seen curved over the dragon's head on Plate X. It may be observed that the body of each serpent after forming the loop, seen in Fig. 8, is twisted in such a way that the back of the animal is always turned outward. If the bodies formed several consecutive loops after the manner of the Caducean serpents, and they apparently may have formed at least two complete loops in order to take the shape seen in Plate X, they would have to be twisted once in the formation of each loop, in order to make all the loops symmetrical.

Two pairs of serpent heads of the conventional type were found among the ruins of the stairway. The figure of the "long-nosed god" appears emerging from the open jaws of each of these heads (Fig. 9). The two pairs are similar in every respect.

Another notable ornament is the great head (Plate XIII, S). Two other heads similar in every respect were found near this one, not underneath the landslide, but on the level ground a few feet in front, where they were buried among other fallen stones and vegetable mould. The position in which they were found leads me to believe that their place was on the façade of the building above the stairway. In the same vicinity were

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found fragments of several pairs of great claws — clearly representing those of some bird of the parrot family. The presence of these claws, which correspond very well with the heads in proportions, would seem to do away with any doubt that might exist respecting the identity of the heads themselves. Each head and each pair of claws belonged very likely to the same sculpture which represented a gigantic parrot or macaw. The head bears a striking resemblance to the sign for the month Kayab in the inscriptions. Compare especially back of Stela B, Copan, 1st glyph. The resemblance is so striking as to offer a very strong suggestion that the month Kayab in the inscriptions is represented by the head of a parrot or macaw and not the head of a turtle. Wherever the turtle is represented in the sculpture the head is not at all like this. Neither the west altar of Stela C at Copan nor the great turtle at Quirigua, to give two well-known examples, has a head with any resemblance to the symbol for Kayab. In the Ball Court Temple at Chichén Itzá forming part of the wall sculpture is a turtle, the head of which is altogether different from the symbol for Kayab (see Maudslay, Vol. IV, Plate 93, *o*). On the other hand, it is true that in the Codex Peres. is seen a turtle with a head quite similar to the sign for Kayab as drawn in the manuscripts.

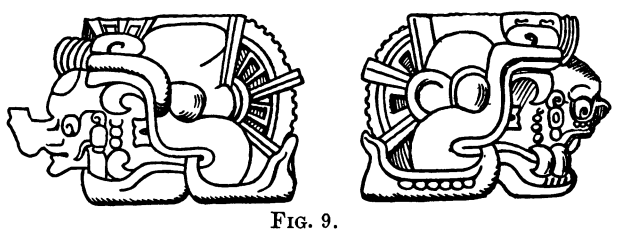

FIG. 9.

The sculpture shown on Plate XIII, V has the same shape and dimensions as the bird symbol of the balustrades (one of which is shown in W, Plate XIII), and may have taken the place of one of these. The heads with which this stone is ornamented are similar to the head in the day sign on step L 1, Plate VI. Compare also Plate XIII, K and L. The animal represented by this head is not recognizable. It differs from the tiger's head which always shows spots as well as a tusk. See Plate VI, G 8, and Plate XIII, C, 1st glyph, and E, 3d glyph.

The sculpture shown on Plate XIII, U is the under side of the last block in step D, Plate V. The block is cut from an older monument of some sort containing an inscription. The sculpture resembles that on X and Y, two stones found in different parts of the ruins.

On Plate XIII, T is shown a fragment of sculpture found near the summit of the mound, and, as would seem probable, formed part of a hieroglyphic frieze running round the temple.

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THE INSCRIPTION.

THERE is one thing not discussed in the foregoing description of the Stairway, because of the absence of definite evidence bearing on the subject. I refer to the impression received while at work on the ruins of the structure, that all the parts were placed in position before they were sculptured. This does not of necessity mean that the whole stairway with its ornaments and accessories was built right up to the top before the sculpture was begun. This is perhaps improbable. At any rate, it is almost certain that each part was placed in position in the rough, and carved afterwards. The altar at the base, the seated figures, the ornamented balustrades, and the steps themselves, all were carved as it would seem *in situ*. It is easier to conceive of the nice adjustment of the adjacent parts having been achieved in this way. Where the lines of the sculpture intersect the joints in the stonework, there is no evidence of the disagreement or disproportion which would be more likely to occur if the stones were carved separately and placed in position afterwards.

More convincing than this, is the evidence in the carving of the glyphs at either end of the steps, which is never so deep or quite so finished as on the remainder of the step. It deepens gradually from the ends, and usually attains its normal depth between the first and second glyphs. There would be no apparent reason for this if the blocks were carved before they were placed in position, but it is easily understood if we suppose that the workmen were at the disadvantage that would be occasioned by the closeness of the balustrades, interfering with their work. There is nothing contrary, therefore, to the supposition that the carving of the inscription was done in the same order in which it is to be read, that is to say, from top to bottom, and that the top step with the beginning of the inscription was the first that was carved, and the lowest step with the end of the inscription was the last executed.

The incompleteness of the inscription, and the imperfect condition or entire obliteration of many of the glyphs in the part that remains, make it a less satisfactory subject for study than most of the long inscriptions at Copan, Quirigua, Palenque, and Piedras Negras. In most of these the initial series as well as many other time reckonings have been deciphered, and the texts are sufficiently legible not only to render the reading unequivocal, but to determine beyond question the significance of the reckonings in relation to a rigid chronological scheme. Even in cases where some of the glyphs are illegible or of unfamiliar form, these glyphs have been restored in the one case and their proper respective meanings assigned to them in the other, by means of the context.

For the reasons already stated, we cannot expect to obtain results so satisfactory in all respects from the inscription on the Hieroglyphic Stairway, and it is not unlikely that the results obtained by others will differ in some respects from those given here. Nevertheless, some very interesting facts appear from an inspection of the glyphs and some interesting problems present themselves.

The notation used in the following discussion is that adopted by Bowditch, which differs from that introduced by Goodman in having 0 instead of 20 in connection with the Katun, Tun, and Kin, and instead of 18 in connection with the Uinal. The numeration assigned to the Great Cycle period by Goodman is made use of, although this is not generally considered settled. The question of its correctness does not affect in any way the calculations made or the results obtained.

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Goodman's tables are used in all the operations.

Turning to Plate VI, we have on step A the continuation of the broken inscription, without knowing what came immediately before. It will become evident, from our examination of the inscription, that the order of reading is from the top downward, from left to right along the faces of the steps.

Date I.

Passing over the first three steps, on which most of the legible glyphs are unknown, we find on step D an initial series beginning at the left and reading as follows: —

D 1. Great Cycle 54.

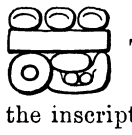
D 2 *a*. Cycle 9. The head which represents the Cycle is characteristic, and does not differ in any material respect from that which stands for this period in many of the inscriptions.

D 2 *b*. Katun 5. Here we have the familiar Katun sign. The numeral above it, if we compare it with the bar representing 5 over the Cycle sign or with the two upright bars in L 1, will appear to be undoubtedly 5.

D 3 *a*. Tun 19. The familiar Tun sign surmounted by 3 bars and 4 dots. Two of the dots are broken away, but comparison with the same numeral in other inscriptions show that we are perfectly justified in reading this as 19.

D 3 *b*. The familiar Uinal sign surmounted by a numeral that looks unfamiliar. This numeral is partly effaced, but parts of it are still clear enough. At the top can be distinguished either one, two, or three dots. Below this appears a sign, the left end of which is a sort of annular object.

On Plate XII, L, 6th block, are two glyphs, the first of which, though only half of it remains, is seen to be the last of the initial supplementary series with the number 9 below; following it is the sign for the month Mol with the sign over it. A comparison of this sign with that over the Uinal in D 3 *b* will show that the two are very much alike.

On Stela C at Copan, north side A 3, over the sign for the month Cumhu occurs the following  The lower part of this sign, with slight variations, occurs often in the inscriptions, usually in connection with numerals or in positions where it would seem to have a numerical value. Among other instances may be mentioned on the north side of the great turtle at Quirigua, where it occurs as in Fig. 10 over the sign for the month Zotz, and again as follows over a sign which has been erased from the stone.

Goodman has already assigned the value 18 to the numeral on Stela C shown a short distance back. This would give the lower part of the sign the value 10. There would seem to be some doubt about the case, however, for the meaning of the text is not clear. Supposing however that this is the correct value, the numeral on Plate XII referred to, would then have the value 12, and the one on step D 3 *b* would represent either 11, 12, or 13.

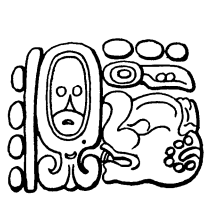


Fig. 10.

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D 4 *a*. Kin 0. The face sign for this period does not show any new features. The numeral above it looks like 0, and the day shows that it must be zero.

D 4 *b*. Ahau. The numeral above the day sign is not clear, but it is not less than 5 or greater than 10.

D 5, 6, 7, 8, and 9 *a* are supplementary glyphs. The last of these, though badly effaced, may be recognized as the last of the supplementary series with number 9 below.

D 9 *b* is the month glyph, and it looks most like Mac, though it might be Chen. The numeral above seems to be 3, and indeed it can be no other, for 54 . 9 . 5 . 19 . 0 . 0 gives 13 Ahau 3 Pop, and since the beginning day of the Tun is the third of the first month, and there are no odd days, the required day must be the third of some month, no matter what the Uinal count is.

Giving the Uinal all possible values from 0 to 17, we get the following list: —

54 . 9 . 5 . 19 . 0 . 0 . . . . . 13 Ahau 3 Pop.
54 . 9 . 5 . 19 . 1 . 0 . . . . . 7 Ahau 3 Uo.
54 . 9 . 5 . 19 . 2 . 0 . . . . . 1 Ahau 3 Zip.
54 . 9 . 5 . 19 . 3 . 0 . . . . . 8 Ahau 3 Zotz.
54 . 9 . 5 . 19 . 4 . 0 . . . . . 2 Ahau 3 Tzec.
54 . 9 . 5 . 19 . 5 . 0 . . . . . 9 Ahau 3 Xul.
54 . 9 . 5 . 19 . 6 . 0 . . . . . 3 Ahau 3 Yaxkin.
54 . 9 . 5 . 19 . 7 . 0 . . . . . 10 Ahau 3 Mol.
54 . 9 . 5 . 19 . 8 . 0 . . . . . 4 Ahau 3 Chen.
54 . 9 . 5 . 19 . 9 . 0 . . . . . 11 Ahau 3 Yax.
54 . 9 . 5 . 19 . 10 . 0 . . . . . 5 Ahau 3 Zac.
54 . 9 . 5 . 19 . 11 . 0 . . . . . 12 Ahau 3 Ceh.
54 . 9 . 5 . 19 . 12 . 0 . . . . . 6 Ahau 3 Mac.
54 . 9 . 5 . 19 . 13 . 0 . . . . . 13 Ahau 3 Kankin.
54 . 9 . 5 . 19 . 14 . 0 . . . . . 7 Ahau 3 Muan.
54 . 9 . 5 . 19 . 15 . 0 . . . . . 1 Ahau 3 Pax.
54 . 9 . 5 . 19 . 16 . 0 . . . . . 8 Ahau 3 Kayab.
54 . 9 . 5 . 19 . 17 . 0 . . . . . 2 Ahau 3 Cumhu.

It will be seen that only one of these dates agrees with the conditions which were derived from our inspection of the glyphs. The one which fulfils in all respects these conditions is, —

54 . 9 . 5 . 19 . 12 . 0 . . . . . 6 Ahau 3 Mac.

Fig. 11.

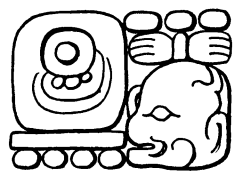

Fig. 12.

Fig. 11 is D 3 *b* restored, and Fig. 12 is a restoration of D 9.

This date would seem to confirm Goodman's conjecture respecting the value of the month numeral in the initial date on the north side of Stela C.*

* Dr. Seler regards this date on Stela C as the normal date, 4 Ahau 8 Cumhu; in which case the sign immediately above the month symbol would be apparently without significance. An inspection of the stone convinced me that the Ahau number is not less than 5.

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On this same step, 15, 16, there seems to be a distance number made up of Kins, Uinals, Tuns, and Katuns, but the numerals are all past recognition. In 19 are seen the day and month signs. The head in the day sign is somewhat injured; the month is apparently Chen. The numerals are not legible.

Date II.

Step E begins with another initial series, as follows: —

E 1. Great Cycle. The central superfix of the Pax sign is erased, and there is really nothing by which to identify the glyph, but it is probably the one called the 54th.

E 2 *a*. Cycle 9.

E 2 *b*. Katun 7 or 8. The Katun sign, unlike that in step D, is a head.

E 3 *a*. Tun. The head which stood for the period is almost obliterated, and the numeral is entirely so. The position shows it to be the Tun.

E 3 *b*. Uinal. Only the great curved tooth can be distinguished in the head. The numeral is very indistinct, but its value is greater than 5.

E 4 *a*. Kin. Here an unusual thing occurs; the Kin number, instead of being represented by bars and dots placed above the head representing the Kin, is represented by a symbol in which a small head appears. This symbol is placed above, and takes the place of the bars and dots seen in the other period glyphs. The face seen in this numeral has the large ear ornament often associated with both the 1 face and the 8 face. The number cannot be identified at present by simple inspection. In the Kin face itself there does not appear anything unusual.

E 4 *b*. Chicchan. The day sign here is very clear, and I take it to be Chicchan. Compare Plate XII. J, second block, 1st glyph, and K, 1st glyph. The first of these I take to be Cimi and the other Chicchan. The day being Chicchan, the unfamiliar Kin numeral must be 5. The day number is not legible.

E 5 *a*. It appears doubtful at first whether this is the month sign, or whether the month sign is to be found in 8 *a*. The head in 5 *a* is not very clear, but it cannot be said to resemble any month sign. The head in 8 *a* is not clear, but it may well be Mac or possibly Chen. The superfix is especially like that of Mac, and the symbol itself is in all probability the fish head that usually stands for that month in the inscriptions.* The number above it is 8.

We have therefore as the probable date, as far as we have been able to make it out: —

54 . 9 . 7 or 8 . ? . ? . 5 . . . . . ? Chicchan 8 Mac.

If we suppose the date to be in the 7th Katun, and give the Uinal all possible values above 5, we get a list of dates in which Chicchan does not appear as the 8th of Mac. But if we suppose the date to be in the 8th Katun, and give the Uinal all possible values above 5, we get a list in which two satisfy the conditions, and we get as the probable date: —

54 . 9 . 8 . 8 . 6 . 5 . . . . . 7 Chicchan 8 Mac.
or 54 . 9 . 8 . 12 . 7 . 5 . . . . . 11 Chicchan 8 Mac.

* That a fish head is intended seems likely from the resemblance of the symbol to the heads of fishes in various sculptures. See Copan, Stela A, west side C 8, where there is a fish, and, underneath it, the sign which is used as a superfix for Mac in the inscriptions, and which might well represent a pair of fins. See also Stela C, initial glyphs; Stela D, initial glyph, and Stela N, north side above headdress.

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The former is the more probable, since the day number is more like 7 than 11.

54.9.8.8.6.5 . . . . . 7 Chicchan 8 Mac.

FIG. 13.

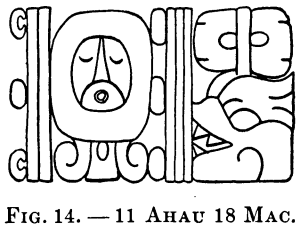

FIG. 14. — 11 AHAU 18 MAC. Date on a small circular stone from Copan.

Fig. 13 is E 8 *a* partly restored.

DATE III.

On step F is another initial series, but the numerals are all illegible : —

F 1. Great Cycle (probably 54th).
F 2 *a*. Cycle (probably 9th).
F 2 *b*. Katun (number above 5 and resembles 9).
F 3 *a*. Tun (number seems to be above 10).
F 3 *b*. Uinal (number seems to be above 10).
F 4 *a*. Kin (glyph and numeral illegible).
F 4 *b*. Day sign (either Kan or Cib, numeral not legible).

Following this is the supplementary series. F 5 is not clear. Compare F 6 *a* with D 6 *a*, and F 6 *b* with E 6 *a* and D 6 *b*. F 8 *b* is the last of the supplementary series, and F 9 *a* is the month sign Kayab, with the numeral 17. This shows the day to be Kan and not Cib, for the latter cannot be the 17th of a month. The Kin number must therefore be 4, and the probable date so far as made out would be: —

54.9.9?.?.?.4 . . . . . ? Kan 17 Kayab.

If we suppose the date to be in the 9th Katun, and if we regard the Tun and Uinal numbers as being above 10, we have a choice between two dates: —

54.9.9.14.17.4 . . . . . 5 Kan 17 Kayab.
54.9.9.18.18.4 . . . . . 9 Kan 17 Kayab.

The first of these would seem to be the more probable, since the day number looks more like 5 than 9 : —

54.9.9.14.17.4 . . . . . 5 Kan 17 Kayab.

Passing over the next four steps and taking up step K, we find in K 1 *a* an unknown head (compare D 20 *b*). K 1 *b* is a cartouche supported on a tripod with a numeral over it. It has every characteristic of a day sign ; the head is too much disfigured to be identified, but it would seem as if it might be a head with a long scroll projecting from the mouth and turned up in front of the face. K 2 *a* is not legible ; K 2 *b* is a head, but is not at all clear. It is possibly the month Muan.

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3 *a* is a familiar sign of unknown significance. From 3 *b* to 4 *b* inclusive is a distance number made up of Kins, Uinals, Tuns, and Katuns. Only the Kin number is clear. The cast shows the Uinal number to be 9, the Tun and Katun numbers cannot be recognized, but the Tun number is certainly above 5, but not above 10, and the Katun number is above 10, but not above 15. 5 *b* has every characteristic of a day sign, although the head does not look familiar. The day and month date corresponding to the number in K 3 *b*–4 is possibly in K 1 *b*–2, preceding the number, but may it not be that K 5 *b* is the day sign, and the corresponding month sign is L 20 *b* = Zotz? Is the number to be counted from the initial date beginning on K 16, or from some other date?

Naturally we would expect to find a month sign in K 16, if the order of the reading is from K 5 to K 16, but in L 1 if the reading is K 5, L 1, etc. In neither place, however, do we find a month sign.

Date IV.

Coming to K 16, it is clearly seen, notwithstanding the condition of the stone, that this glyph is the beginning glyph of an initial series. At the lower part the outline of the Pax symbol is distinct, as is also the comb-like flank on the left above. All else is obliterated.

K 17 *b*. The Cycle.
K 18 *b*. The Katun.
K 19 *b*. The Tun.
K 20 *a*. The Uinal.
K 20 *b*. The Kin.

The Cycle, Katun, and Tun signs are not very clear, but by comparison with those in other inscriptions they can all be recognized. The Uinal is at once recognized by the characteristic curve and the Kin head is very similar to the heads which stand for the same period in other inscriptions.

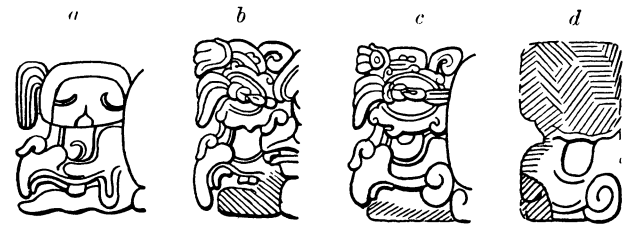

Fig. 15.—*a*, Temple of the Sun A 8. *b*, Palace Steps A 3. *c*, Palace Steps C 4. *d*, Hieroglyphic Stairway K 18 *a*.

Returning to the Great Cycle glyph, there is nothing to show what place it occupies in the scale of numeration we have adopted, and we must pass it over as unknown for the present. The number attached to the Cycle, being entirely effaced, must be passed over also as unknown. The Katun number, represented by the face 18 *a*, is not easily recognized. Two things may, however, be noticed about this face: first, the great curved tooth at the back of the mouth, characteristic of the Uinal head; second, the distance between the bottom of the head and the eye is small in proportion to the entire height of the head. Now, these two things are marked features of the face representing 13 in two conspicuous instances. In the Temple of the Sun at Palenque, A 8, is

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a head known to stand for 13 (Fig. 15 *a*). This face not only has the curved tooth like the Uinal head, but on the high upper portion of the head is displayed the ordinary Uinal sign. Again on the Palace steps at Palenque C 4 is another head for 13,* in which the curved tooth is still more fully developed, and on the high upper portion of the head is an ornamental headdress (Fig. 15 *c*). Nothing definite can be distinguished above the eye in step K 18 *a*, but the distance is in itself significant. However, these indications are not sufficient to identify the Katun number, and we pass it for the present as unknown.

The Tun number 19 *a* is also represented by a face, and this too is far from being clear. There are certain markings near the mouth that look like the dots that serve to distinguish the 9 face, but as they are very faint and ambiguous they cannot be relied upon. There seems to be a marked resemblance between this face and that in step A 4 *a*, and this offers another suggestion in support of its being a sign for 9.

A 4 *b* consists of an extended hand with thumb pointing upward, supporting a head. The head in this case is very much like one which occurs often in the inscriptions and ornamental carvings, and under the name of the head of the "long-nosed god" and other appellations has been identified with one occurring frequently in the codices. In the sculptures it seems to have two forms or variants. One of these is always distinguished by the square cross on the forehead, and when this form has a known number attached, that number is always 7 (Fig. 16 *b*). The other form, the one which resembles the face in A 4 *b*, is without the cross, and when it has a known number associated with it, that number is always 9 (Fig. 16 *a*).† Moreover the outstretched hand sometimes occurs in the inscriptions supporting a head which has been called the North Star; and wherever I have seen this combination, it takes the number 9 (Fig. 17).‡

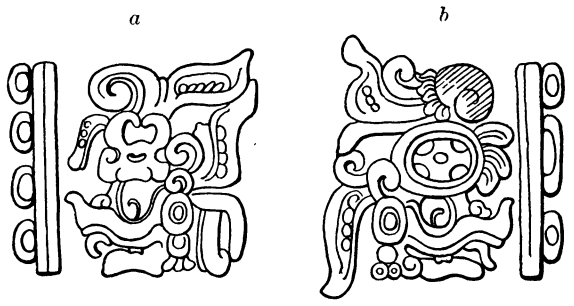

FIG. 16. — FROM STELA D AT COPAN.

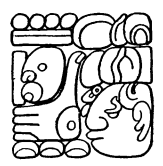
FIG. 17. — STELA 1, COPAN, EAST B 4.

Now in step A 4 *a* is this particular form of hand supporting a head very much like one which, so far as our experience goes, always takes the number 9 when it takes

* Goodman has given the reading of this date as 55 . 3 . 18 . 12 . 15 . 12 . 8 E b 15 Pop; but I think there can be no doubt that it reads 54 . 9 . 8 . 9 . 13 . 0. 8 Ahau 13 Pop, as Seler has stated.

† For examples of this form see especially Copan, Stela P, north A 9. Altar R, 12. Stela D, north A 6. Stela D, west side, and Step in Temple 11, 9; also Palenque, Temple of the Cross under left figure, and Temple of the Sun to right of shield. For examples of the other form see Copan, Altar T, south side 1 *a*. Stela D, east side, and Temple of the Sun, Palenque, to left of shield.

Since this Memoir went to press I have seen *Die Alten Ansiedelungen von Chaculá* by Dr. Seler of Berlin University. In this work the author calls attention to the association of 9 and 7 with the two variants of this face. He also refers to the *Zeitschrift für Ethnologie* for statements in the same connection. When this paper was written, I was not aware of Dr. Seler's studies in this connection. He regards the face shown in Fig. 16 as the face of the Watergod, and, following Förstemann, he calls the sign seen on the forehead in Fig. 16 *b*, the symbol for the planet Venus.

‡ See Copan, Stela I, east A 5 and north B 7. Stela 1 B 4 and Hieroglyphic Stairway, Plate XII, E 2.

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any number. If therefore the face in this case represents a number, we have strong reasons for believing that number to be 9. This of course is far from conclusive regarding the value of the face in K 19 *a*, for the identity of the two faces cannot be proved. We must pass this number as unknown for the present. It may be worth while in this connection to compare Plate XIII, R. Here is seen a similar combination without any numeral, but curiously enough it is preceded by the last of the supplementary series with the number 9.

The Uinal and Kin signs, as we have seen, are crowded into the last square on the step, and their numbers are represented by the bar and dot method. The Uinal number is 14, and the kin number is 9.

If the inscription, after passing step H, is to be read down the left side of the altar, and continued on the right, or vice versa, for that matter, we should expect to find the day sign in L 16 ; but there is nothing at all in this glyph that looks like a day sign. If, on the other hand, the inscription is to be read from one end of each step to the other, down to the bottom step, then we must look for the day sign in L 1, and sure enough this glyph has every characteristic of a day sign. The head is not at all familiar as a day sign, although the same or a similar head is common enough in the inscriptions where its meaning is not known.

The day number is 12, and the day itself can be no other than Muluc, since the Kin number is 9.

The next thing to do is to find the month sign, which is not so easy, because the month signs are not so clearly distinguished by their form as the day signs, nor is the position of the month sign relative to the day sign by any means constant. Two things are recognized, however, as determining the position of the month sign in the initial dates. Either it comes immediately after the day sign, or else it follows the supplementary series, consisting of from six to nine glyphs. In this position it can be recognized, in the great majority of cases at least, by the last of the supplementary series, the form of which is pretty constant.*

L 2 is plainly not the month glyph, and passing over the succeeding glyphs, we recognize in 18 *b* the last of the supplementary series, as may be seen by comparing it with F 8 *b*. Following it in 19 *a* we should ordinarily expect to find the month glyph. What we find, however, is a glyph which, though not at all clear, has little resemblance to a month sign. It perhaps looks a little like Kayab, but the likeness is remote, and moreover no numeral appears in connection with it. We know that the month sign we are in search of must have one of the numbers 2, 7, 12, or 17 attending it. It must be concluded that 19 *a* is not the month sign. The last glyph on the step has the appearance of a month sign, but the sign for the month is never found so far removed from the day sign.

Coming back to our starting-point, we find in 3 *b* the sign for the month Muan, attended by a face, 3 *a*. This must be the sign we are in search of, and if so the face 3 *a* represents either 2, 7, 12, or 17. It will be necessary to determine the value of this numeral before proceeding any farther, and on this everything will now depend. The jaw is not a skeleton jaw, and therefore the two higher numbers are eliminated, leaving 2 and 7 to be decided between.

I know of only one face sign for 2. It is in the initial series on Lintel 2 of Piedras Negras, and Bowditch has shown its value to be 2. A comparison of this

* See statement on page 5 of *Notes*, by Charles P. Bowditch, on the report of Teobert Maler in Memoirs Peabody Museum, Vol. II, No. 1. Both d. and m. may follow supp. s., *v.* St. 1 and 10, Cop.

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glyph and L 3 *a* shows no similarity between them, and this leads us to the conclusion that the number must be 7.*

The results obtained by inspection from the initial series beginning on K 16, contained in the preceding paragraphs, may be summed up as follows: —

Great Cycle (number unknown).
Cycle (number unknown).
Katun (number unknown, but indications point to 13).
Tun (number unknown, but indications point to 9).
Uinal 14.
Kin 9.
12 Muluc 7 Muan.

Counting back 14 Uinals and 9 Kins from 12 Muluc 7 Muan, we come to 9 Ahau 3 Uayeb, the beginning of the Tun.

Now we shall have to make the assumption that the Great Cycle is the one that we have been calling the 54th. The justification for doing this consists in the knowledge that all known dates at Copan, and almost all those in the other localities where similar inscriptions are found, begin in this way. This is the only assumption made. We look first in the 9th Cycle of 54th Great Cycle, because we are accustomed to find most of the dates in this place. The date 9 Ahau 3 Uayeb is the beginning day of the beginning Tun of the 6th Katun. This is manifestly not the date wanted, for it seems clear that the Tun number is not zero. The face sign for 0 has a hand on the lower jaw (Fig. 18). The Katun number is not like 6. All the known face signs for 6 have the hatchet eye, and this would seem to be a constant distinguishing feature of the numeral (Fig. 19).

FIG. 18. — STELA 1, COPAN, EAST A 4.

FIG. 19. — TEMPLE OF THE SUN, A 7.

The next place where the date 9 Ahau 3 Uayeb occurs is in the 11th Cycle, and it begins the 9th Tun of the 13th Katun.

The date occurs altogether five times in the 54th Great Cycle: —

54. 2. 3.13.0.0
54. 4.11. 2.0.0
54. 6.18.11.0.0
54. 9. 6. 0.0.0
54.11.13. 9.0.0

The last of these is the only one that does not seem to be contradicted by the Katun and Tun numerals, and moreover it corresponds exactly with what was observed in our inspection of these numerals, and we may without much hesitation write down the date as: —

54.11.13.9.14.9 . . . . . 12 Muluc 7 Muan.

* Compare Quirigua, Stela D, east A 7 (numeral of the day Ahau).

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In Fig. 15 is shown a drawing of 18 *a* together with drawings of the face signs for 13 in the Temple of the Sun inscription, and on the Palace steps.

The position of the month glyph in this initial date, though unusual, is not singular. The inscription in the Temple of the Sun at Palenque has the month glyph in the same position; that is to say, the month sign in both of these inscriptions comes in the second place after the day sign.

The Kin number in K 3 *b* is clearly 10, and therefore if the period, whatever it is, expressed in this glyph and the next be added to or subtracted from the initial date on step K, the resulting day will be Cauac. This may be of use in identifying the day sign in K 5 *b*. The cast shows the numeral above this day sign to be either 7 or 8, probably the latter. If we suppose the period in K 3 *b*–4 to read —

14 . 7 . 9 . 10

which is not unlikely (see page 25), and if we subtract this period from Date IV, we come to a date in which the day numeral corresponds to that seen in K 5 *b*, and the month to that in L 20 *b*.

54 . 11 . 13 . 9 . 14 . 9	12 Muluc 7 Muan
14 . 7 . 9 . 10	
54 . 10 . 19 . 2 . 4 . 19	8 Cauac 12 Zotz (Date IV *a*)

The value of the numeral with the month Zotz in L 20, is not revealed by inspection.

On Plate V is another fragment of the inscription. This fragment begins abruptly in the middle of a step. It will be remembered that these steps had fallen in a body, and it should be said that while their relative positions were preserved, yet when only a portion of a step remained, it was not always possible to tell the *exact* position of that portion in the step itself.

There is nothing, however, with the exception of the first step, which is doubtful, that is not approximately in its right position. To make this clear, it will be best to take up each step separately.

Step A. Only the first block was found in this position; the others were found near the bottom of the slope among the débris. The first joint comes in the middle of the second glyph, and it is evident that this part of the restoration is all right. The second joint, however, falls between the halves of the fourth glyph, and it may be questioned whether these two blocks belong together. The third joint falls on the blank space between the fifth and sixth glyphs, and this also may be questioned. The fourth and last joint intersects the seventh glyph in such a way as to leave no doubt concerning this part of the restoration. It will be seen that from the middle of A 12 to the end of the step the glyphs may or may not belong in this position. They were photographed so because the blocks seemed to fit each other fairly well, and to fill up the space in the step.

Step B. These four blocks are shown as they were found, but it is impossible to say that they occupy their exact position in the step. This must be regarded as approximate.

Step C. In this case there is no doubt that the two portions of the step are in their proper positions.

Step D. This is especially an interesting step. The first part is in its right position, as is evident from the condition in which it was found. The third block, the one with the lower part of the figure and a portion of the next glyph were found among

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the débris below and replaced. There can be no doubt about the correctness of this restoration. After this a portion of the step is missing, but a smaller portion than at first seemed to be the case. It was not until after the plate was made and I had begun to examine the glyphs in detail and it was too late to make a correction, that an error in the arrangement of the latter part of step D became apparent. This portion of the step consists of two blocks, the first of which is broken in two in the middle of D 11. The smaller portion of this block was found at the bottom of the slope. The other piece of the block was found farther to the left than shown in the plate, leaving a space between it and the next block which occupied about the same position, relative to the extreme right, as in the plate. But as it was evident from the sculpture that the two blocks had occupied adjacent positions, they were brought together in the position seen in the photograph, making the joint which appears in D 13. It is evident now, as will appear later, that this portion of the step is placed too far to the right, and the glyph which appears as D 10 is really D 8, and nothing is missing in the middle of the step except the latter half of D 7 and the first part of D 8, while two glyphs besides the one of which a portion remains are missing at the end to the right.

Step E. This step is complete with the exception of a small fragment of the last glyph. It consists of four blocks, not counting the space in the middle occupied by an independent sculpture. The first joint falls on the fourth glyph. The joint between the other two blocks falls between E 13 and E 14. The last block is broken in two, and the last half of this block is the only part of the step not found in position. Measurement will show that the central sculpture occupies the space of just three of the average glyphs on the step. The same is true of the next step, F. On the left of the figure are six glyphs of regular size, and one that occupies only about half the space of the others; we may say seven glyphs. On the right also are seven glyphs. This makes the whole length of the step equal to seventeen glyphs, which is the number it would contain if they were continuous from one end to the other. This is also true of step F. Returning now to step D, measurements will show that the prone figure following the third glyph occupies exactly the space of three of the average glyphs on the same step. Taking this in connection with what has been observed of steps E and F, we may conclude that there were seventeen glyphs on this step also, or rather fourteen glyphs besides the prone figure, which is equal to three. Of these fourteen only twelve remain (three of these twelve are represented by portions only). The two missing glyphs are D 16–17, which ought to be shown in blank on the plate, as will appear presently.

Date V.

On Plate XII, E is seen a figure very much like the one in step D. It is followed by a glyph which in its composition resembles very closely a Great Cycle glyph, or the beginning glyph of an initial series. It differs from the known Great Cycle glyphs in the nature of the central superfix of the Pax sign. This element, usually a head, is here a form of the Kin sign.

Date VI.

Comparing this glyph with that which immediately follows the prone figure on step D, it will be seen that the remaining portions of the one are almost identical with the corresponding portions of the other. Unluckily, the glyph on step D is broken away almost in the middle, and the small portion of the central superfix that remains

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is not clear enough to show whether or not it is the same as that in the glyph to which reference has been made. An examination of the cast leads to the conclusion that it is probably not the same, but that it is in this case a head. This is not certain, however. An examination of the fragment of a glyph that appears in D 10 shows it to be a head with a hand on the lower jaw, the mark of the Cycle sign. I will therefore call this glyph D 8, and those following it will be referred to as 9, 10, 11, 12, etc., instead of 11, 12, 13, 14, etc. In D 9 *a* the symbol can no longer be recognized, but the position shows it to be the Katun. In 9 *b* is a head which, though not very clear, is seen to resemble the Tun head in a number of inscriptions. In 10 *a* is seen the curve of the Uinal head, and the Kin head in 10 *b* resembles especially the head representing the same period in Quirigua, Stela A, Initial Series; Stela C, east side, Initial Series; Stela E, east side, Initial Series, and Piedras Negras, Stela 1, Initial Series.

Returning to the numbers of the periods, we are obliged to pass over the numeration of the Great Cycle and Cycle as unknown. Coming to the Katun number, although the numeral is somewhat injured, it seems quite plain that there are three bars above, and the number is 15. The Tun number is not less than 10 nor greater than 15. Nothing more definite than this can be determined by an inspection of the numeral. The Uinal number is 10, and the Kin number is 10.

In 11 *a* is a day sign which looks like Oc. It is clear that it must be Oc, since there are 10 odd Kins in the count. The day number is 11.

In 11 *b* and 12 nothing like a month sign appears. In 13 *b* is a sign that looks something like the last of the supplementary series, but no numeral appears with it. If 11 *b* counts as two, and 12 counts as two, and 13 counts as two, then we have a series of six glyphs, followed in 14 by one that looks like the sign for the month Cumhu, having in front of it what might be taken for the numeral 3. I feel confident, however, that this is not the month glyph. Keeping in mind that two glyphs are wanting at the end of the step, it seems plausible at least that the supplementary series in this case extended from 11 *b* to 17 *b* inclusive. My reason for regarding 17 *b* as the last of the supplementary series is that on step E 1 is what I believe to be the month glyph corresponding to the initial series on step D.

The value of the face numeral in E 1 *a* is not at first sight apparent.

The day Oc requires that it be either 3, 8, 13, or 18. The skeleton jaw shows that it is not below 10, and 13 and 18 are left to choose between. Except in the matter of the jaw the face resembles the 3 face most closely. The resemblance to the face in the Temple of the Sun A 6 is very marked. The band about the head in the two cases is strikingly similar. The frontal in E 1 *a* is too much injured to admit of comparison, but the resemblance of the two heads is so strong that I feel justified in the inference that the face in E 1 represents 13, being the 3 face increased in value by 10. This is in keeping with the methods of the Mayas, as may be seen by comparing the 6 face with the 16 face, for example.

The results of our inspection of this initial series are then as follows: —

Great Cycle (number unknown).
Cycle (number unknown).
Katun 15.
Tun 11, 12, 13, 14, or 15.
Uinal 10.
Kin 10.
11 Oc 13 Pop.

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Counting backwards from 11 Oc 13 Pop 210 days brings us to 3 Ahau 8 Chen, the beginning day of a Tun which we know to be the 11th, 12th, 13th, 14th, or 15th Tun of the 15th Katun of some Cycle of some Great Cycle. Going to the 9th Cycle of the 54th Great Cycle to make the first trial, we find that no Tun of the 15th Katun begins with this date. In fact, no Tun within the above-mentioned limits in the 15th Katun of any cycle of the 54th Great Cycle begins with this date. If I am right in regard to the period numbers, this date does not fall within the Great Cycle beginning with 4 Ahau 8 Cumhu. Where does it fall?

If the date reads —

15 . 15 . 10 . 10 . . . . . 11 Oc 13 Pop.

it can come only in the 9th Cycle of the Great Cycle beginning with a day 4 Ahau 13 Uo, which is the 62d in Goodman's scale of numeration.

If the Tun number is 14, the date is in the beginning cycle of Great Cycle 72, and giving the Tun number all values from 11 to 15, we get the following dates: —

72. 0.15.14.10.10	11 Oc 13 Pop.
62. 9.15.15.10.10	" "
26.12.15.11.10.10	" "
17. 8.15.12.10.10	" "
8. 4.15.13.10.10	" "

All of these look absurdly remote from what we would expect.

Following the month glyph in E 1 come a number of glyphs all of which look familiar enough, though their meanings are not known. In E 12 appears a distance number made up apparently of 5 Kins, ? Uinals, and 6 Tuns, — assuming that the bar placed before the Uinal sign stands for the Kin number. The upper corner of the step is somewhat worn, and the Uinal numeral, if placed above, has entirely disappeared. It would seem, however, as if the Uinal numeral had been placed at the right of the sign for that period for lack of space above. This numeral looks like 1, and the number may be read: —

6 . 1 . 5.

E 13 *a* is a head of unknown meaning; compare with F 1 *b* and Plate VI, K 5 *a* as to form and position. 13 *b* is a day sign and 14 *b* is the month Pop. The subfix of Pop looks the same as in E 1. 14 *a* is a head surmounted by a sign, which may also be a head, but which is not at all clear. The month numeral must be expressed in 14 *a*, for there is no space above for a numeral. The face in 14 *a* may stand for 8. It looks very much like 8, although the 8 and 1 faces look so much alike that it is often difficult to distinguish between them.

The numeral over the day sign in 13 *b* is not clear, but it is a high number, surely above 10.

If the distance number is 6. 1. 5 = 2185, and the date is forward from 11 Oc 13 Pop, it is 12 Men 8 Pop, which corresponds very well with the date in E 13–14.

Of course it may be argued that the Kin count is given in E 12 *a*, and not in the bar at the left of the Uinal sign. Compare the text in this place with that on B 10–11, where the number is clearly 11. 9. 9.

The face above the supposed Kin sign in E 12 *a* is not very clear, but it looks very much like a 10 face. A row of teeth is distinctly seen, as well as the skeleton jaw.

180

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Compare face in Fig. 20, 9th glyph, where we have the familiar date 6 Caban, 10 Mol. Now, if we adopt this reading, we get a curious result: —

$$6 . 5 . 10 = 2270.$$

FIG. 20. — INSCRIPTION ON THE FOUR SIDES OF A SMALL STONE TABLE FROM COPAN.

Counting forward this number from 11 Oc 13 Pop, we come to 6 Ahau 13 Tzec, a date that is not found on step E. But in F 2 is found a date, an inspection of which, even in its mutilated condition, will show it to be 6 or 8 Ahau 13 Tzec. It would seem, therefore, as if there were two collateral numbers in E 12 (Fig. 22), each of which is to be added to the initial series on step D.

Initial date + 6 . 1 . 5 . . . . . is 12 Men 8 Pop (Date VI *a*).
Initial date + 6 . 5 . 10 . . . . . is 6 Ahau 13 Tzec (Date VI *b*).

If the text will bear this construction, we have double assurance that the preceding date is 11 Oc 13 Pop, and I can see no reason why this should not be the construction intended.

In this connection it may be interesting to compare a date on the hieroglyphic bands at the base of Stela N (Fig. 23), which may be 11 Oc 13 Pop.

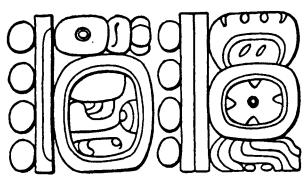

FIG. 21. — DATE ON TOP OF TABLE HAVING THE INSCRIPTION SHOWN IN FIG. 20, ON THE EDGES.

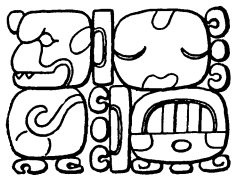

FIG. 22. — E 12 PLATE V, SLIGHTLY RESTORED.

Step G has one and a half glyphs missing from the left end, and nearly three from the right; otherwise it is complete. Compare G 2 with E 4, G 3 with E 5, G 5 with E 11 *a*, G 11 *a* with E 11 *b* and with Plate VI, K 3 *a*.

In G 11 *b* – 12 is another distance number. The Kin number in 11 *b* is 0, but the numerals with the other period glyphs are not legible. Compare G 13 *a* with E 13 *a*, F 1 *b* and Plate VI, K 5 *a*. G 13 *b* is a day sign, and G 14 is the month Tzec, having in front of it two curves and the number 8 or else 13. It may be that the two curves form part of the month numeral.

On step J 12–13–14 appears a figure similar to that on D 4–5–6. The attitude as regards the hands and head especially, in this figure suggests a person swimming, but it is doubtful whether this is the idea that it is intended to express.

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The numbering on the top of the plate applies down to and includes step K. After that the glyphs are closer together, and the last two steps on the plate have twenty glyphs on each, the same as those on Plate VI.

On Plate XII are shown a number of disconnected blocks reproduced from photo-

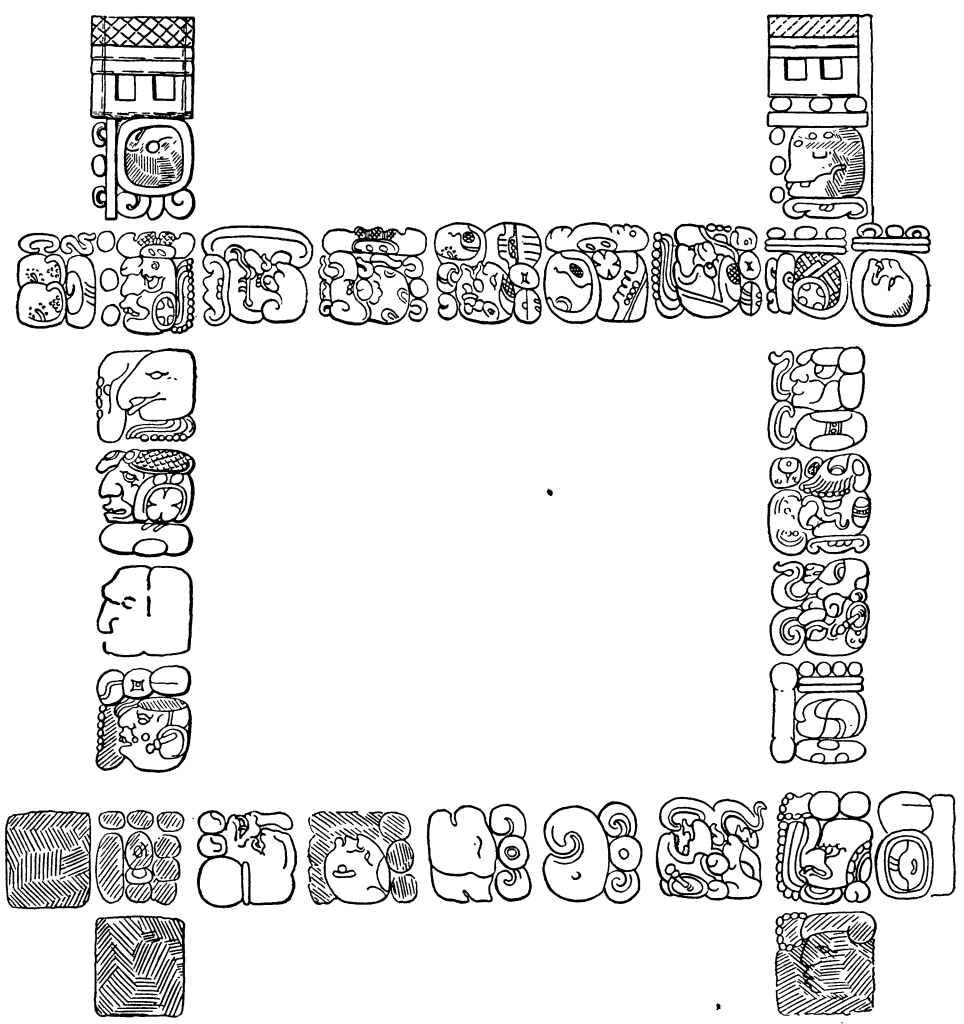

FIG. 23. — HIEROGLYPHIC BANDS AT THE BASE OF STELA N.

graphs of the originals. These blocks contain a number of glyphs in varying degrees of preservation, and each of these fragments fills a gap somewhere in the inscription, but there are much longer gaps which cannot be filled. It will be seen that in several places two or more blocks are photographed together, giving a sequence of several glyphs.

In E 1st fragment, there are three blocks forming a sequence. The first contains just two complete glyphs. The second contains a prone figure, and the third, the beginning glyph already mentioned. It is very doubtful whether the first of these blocks bears the relation to the next one that is indicated in the photograph. The joint falls on a plain surface, and there is nothing to indicate such a relationship. The other joint falls on the sculpture, and there is no question about it. The last

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block was found resting on the slope higher up than the highest step shown on Plate V, showing that the initial date of which E 4 was the beginning glyph preceded the date on step D, Plate V in position. E 1 is recognized as the beginning or left end of a step by the character of the sculpture.

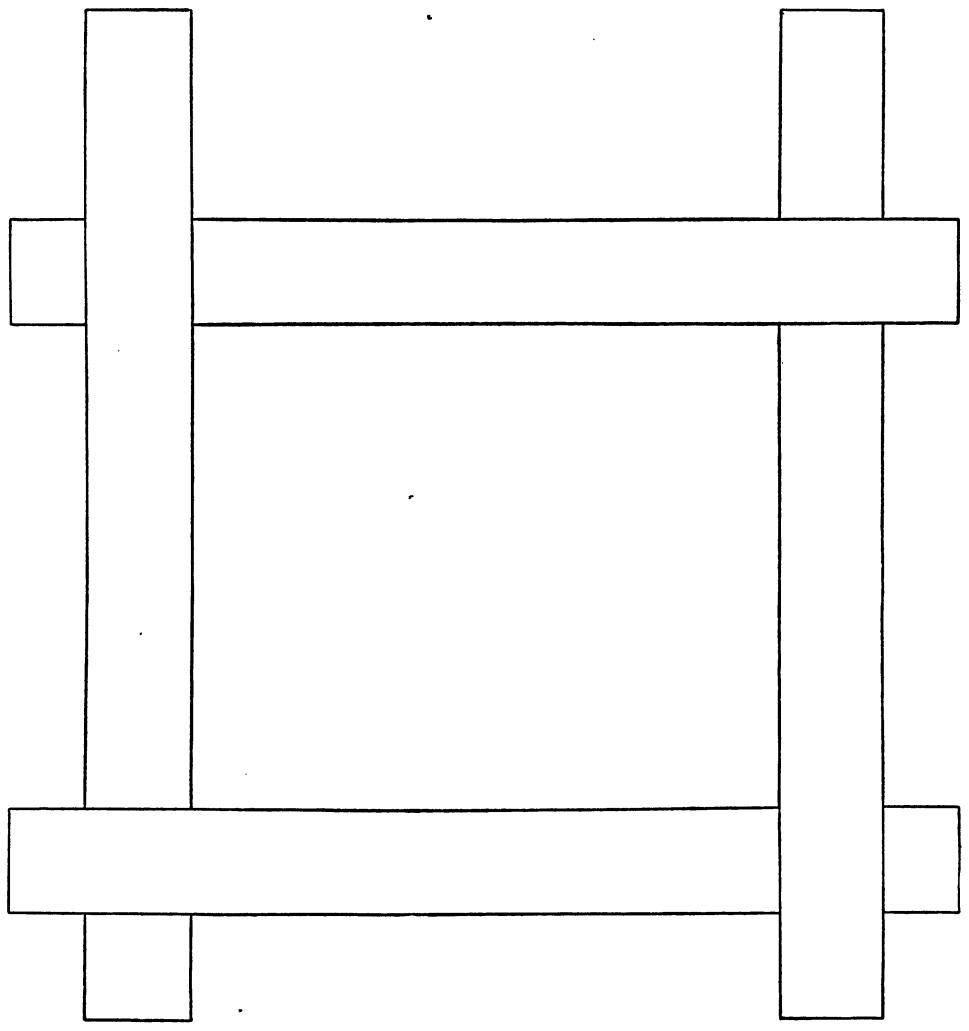

FIG. 24. — PLAN OF HIEROGLYPHIC BANDS AT THE BASE OF STELA N.

E 1 is evidently 3 Yaxkin. A day glyph must have been on the preceding step near or at the right end, and was probably preceded by either a distance number or an initial series.

F 1 is also recognized as the beginning of a step. Compare F 1 *a* with Plate V, E 11 *b*, and G 11 *a*, also with Plate VI, K 3 *a*. F 1 *b* – 2 is a distance number made up of 6 Kins, 14 Uinals, and 11 Tuns. F 3 *b* is 11 or 13 Ahau, F 4 *b* is 8 Cimi (?), and F 5 may prove to be 14 Tzec. On the third block in the same line appears another number consisting of 19 Kins and 1 Uinal.

In H there is a joint between the second and third glyphs, and another in the middle of the fourth glyph. The restoration is probably correct in both instances.

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In I are three restorations, one joint coming in the middle of the second glyph and one in the middle of the third. The other comes in the eighth glyph, this being the extreme right-end glyph on a step. The number expressed in glyphs 7 and 8 is 6 . 18 . 18.

In J there is one restoration in the fourth glyph, and in K there is one in the second glyph. J 4 *a* is 6 Cimi, and K 1 is ? Chicchan, in all probability, as has already been intimated. It is quite likely that there was an initial series made up of glyphs of the same character as those in K 1, 2, 3, 4, 5, and it is not unlikely that O 6 is the Tun glyph belonging to this series, and O 7, of which only a fragment remains, the Uinal glyph. K 1 would be the day glyph, and the month glyph would come after a series of supplementary glyphs.

In R can be seen the beginnings of four initial dates.

On Plate XIII are additional fragments of the inscription. The fragment P seems to be a part of an initial date, and to read, 9th Cycle, 14th Katun. N is another fragment, possibly of the same initial date, although the block in N is somewhat thicker than that in P, and has a border along the bottom, which is wanting in the other fragment. As all of the steps found in position have this border at the bottom, it is conceivable that in fragments where it is absent it had been supplied by a thin slab of stone placed beneath, and this would make the fragment in P the same thickness as that in N. Since the plates were made I have discovered that the fragment shown on Plate XII, D, last fragment, should follow N on Plate XIII, giving the Kin sign, as shown in the drawing, Fig. 25, and the sequence reads: ? Tuns, 16 Uinals, and 5 Kins. If the fragment P belongs to the same sequence, we would have

9 . 14 . ? . 16 . 5.

The fragment D has a number as follows: ? Kins, ? Uinals, 15 Tuns, and 1 Katun. In the third glyph is seen the symbol which Förstemann and others have called the Venus sign. Here it is enclosed in a cartouche and is accompanied by the number 7. It has the characteristics of a day sign, although the support underneath differs from that commonly associated with the day signs. It is probably 7 Lamat. Compare the head which precedes it with the heads preceding day signs on Plates V and VI, already pointed out.

In J is seen the date 8 Oc or Chicchan 3? There is little doubt the day is Oc and not Chicchan. It should be mentioned that some of the fragments on this plate are shown on a somewhat smaller scale than others.

On the fragment Q appears ? Ahau 18 Tzec.

It will readily be seen, by the foregoing inspection of the glyphs, that this inscription contains considerable chronological matter of some sort, embracing long periods of time; how many years we are not able to say because many of the dates are lost. Leaving aside all dates except those in that part of the stairway still in position, the lower part, which according to our estimates is not more than one-sixth of the whole inscription, there occur four initial dates in progressive chronological order, just as dates would occur in an historical record. According to the interpretations set down in these pages the second of these dates differs from the first by 2 . 18 . 12 . 5 = 17,525 = 48 years and 5 days (allowing 365 days to the year). The third date differs from the first by 3 . 15 . 5 . 4 = 27.104 = 74 years and 94 days. The third and last of these dates differs from the first by 2 . 7 . 10 . 2 . 9 = 342,049 = 937 years and 44 days.

184

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Whether or not the initial dates in the preceding portions of the inscription led up in regular chronological order to the first of these (Date I), it seems impossible at present to determine with anything like assurance.

If by any chance this should prove to be the case, it is not inconceivable that the retrospect may have extended to an era as remote as that apparently denoted by Date VI in any one of the three earlier of the five readings given on page 32, an era which, however imaginary in its scenery, is well within the bounds contemplated by the time count and in every way consistent with the scope of the calendar in use among the Mayas.

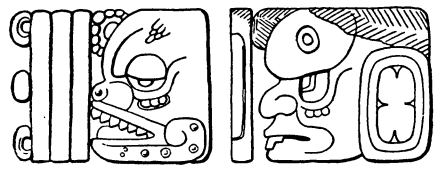

FIG. 25.

How near the beginning of the inscription Date VI was, it is not possible to say, but the great quantity of sculptures found *underneath* the landslip would seem to indicate that the part of the inscription where it occurs was well up towards the top of the stairway. The reasons have already been given for believing the date which presumably followed the "beginning glyph," on Plate XII, E 4 (Date V) to have preceded Date VI in position.

Each of the long inscriptions at Copan, and elsewhere, whether on stela, altar, temple walls, or steps, begins with an initial date which is regarded as the date on which the corresponding monument was erected or dedicated. It is impossible to tell whether the inscription on the Hieroglyphic Stairway began in the same way or not, but according to the same theory it may be inferred that the concluding date is the one that refers to the stairway itself, the date on which some ceremony connected with its completion or possibly the inauguration of the work was performed.

This makes the stairway, with one probable exception, the latest monumental work at Copan, which is not surprising, for the elaborate architecture, the evolution of the ornament, the finish of the sculpture, and the highly artistic quality of the glyphs, all seem to argue an advanced state of development. It may be a matter for some surprise that it should be separated from all the other monuments with known dates by so great a period of years. The next latest date is that on Stela N, which reads 54 . 9 . 16 . 10 . 0 . 0, and is therefore 730 years earlier than Date IV, or, to be exact, 266,329 days. The probable exception referred to is Stela C, Copan, which has on the south side an inscription having a date which would seem to be not far removed from Date IV, and it is not unlikely that when the dates on Stela C are understood, this monument will be found to belong to the same period as the Hieroglyphic Stairway. The two monuments have certain technical affinities in the carving, as though they might have been the work of the same master.

Next to Stela N the latest date is that on Stela M, which is 54 . 9 . 16 . 8 . 0 . 0, making the stela about 5 years older than Stela N. From its association with the stairway, one would be led to suppose that this stela belonged to the same period, but it appears otherwise. It would seem to have stood in front of the older edifice, that served at last as a foundation for the Hieroglyphic Stairway with its temple, for centuries before the latter was built.

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The centre of the stairway was located with special reference to the position of Stela M, but this may have been for architectural effect entirely, or with this end in view, Stela M may have been moved at the time the stairway was built. Anyway, it is not necessary to suppose that the erection of the one had anything to do with that of the other. What we must suppose is that a long period of comparative inactivity elapsed between the setting up of Stelæ M and N on the one hand, and the erection of the Stairway and (presumably) Stela C on the other hand.

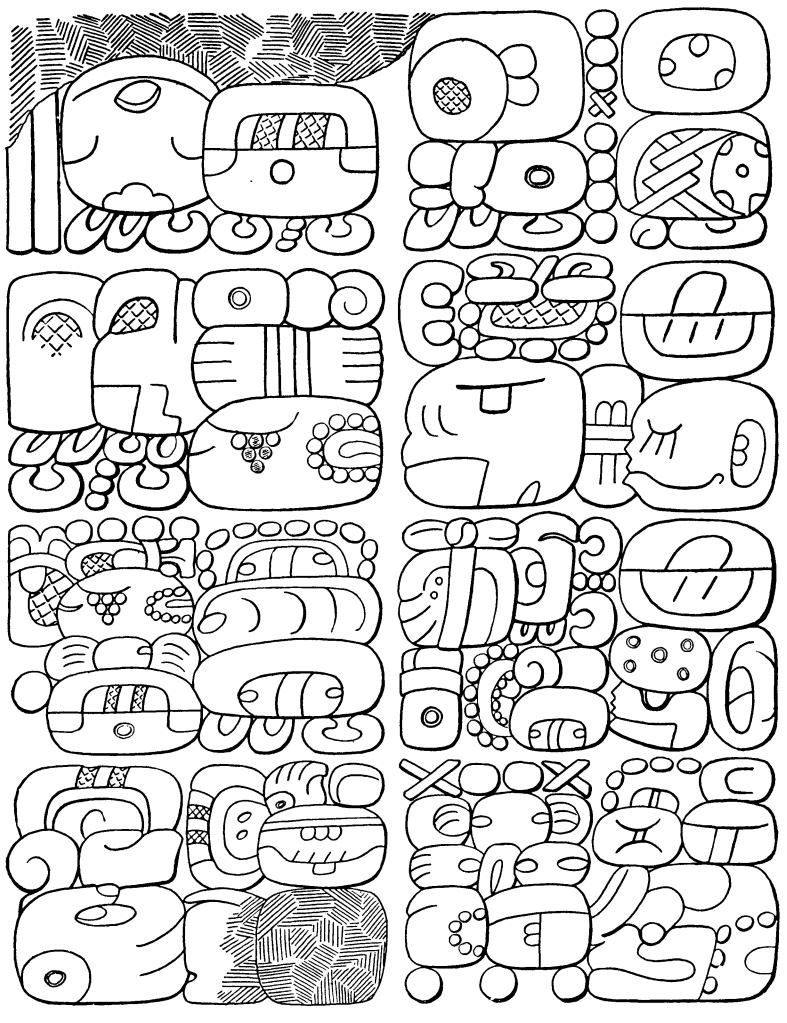

FIG. 26. — INSCRIPTION ON A SMALL STONE PILLAR FROM COPAN.

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HIEROGLYPHIC STAIRWAY.

STELA N.

MOUND 26 AND ADJOINING PART OF MAIN STRUCTURE SHOWING SITE OF HIEROGLYPHIC STAIRWAY BEFORE EXCAVATION.

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REMOVING THE FALLEN STEPS.

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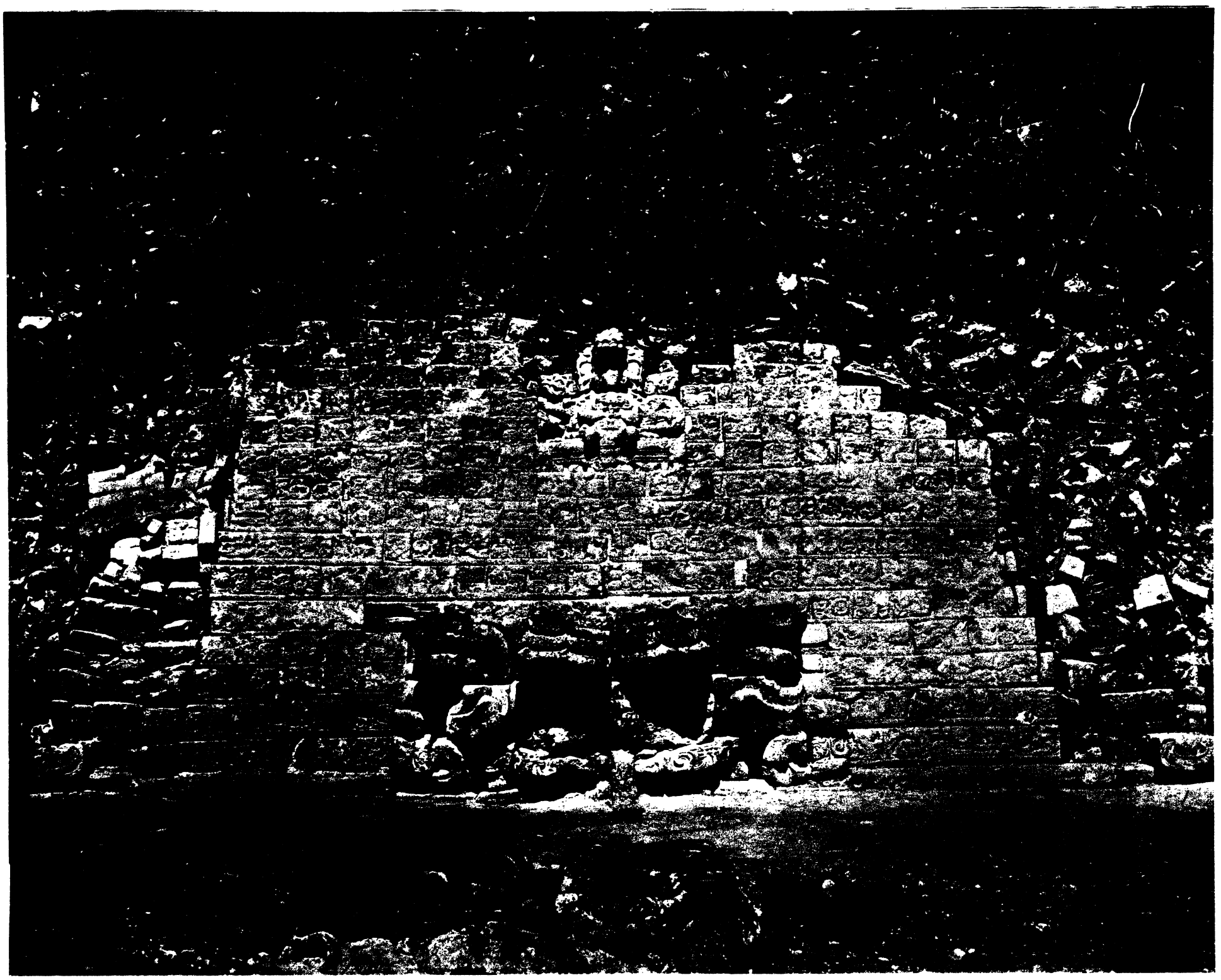

HIEROGLYPHIC STAIRWAY AFTER EXCAVATION.

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HIEROGLYPHIC STAIRWAY AFTER EXCAVATION.

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Oversized
Foldout

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Foldout

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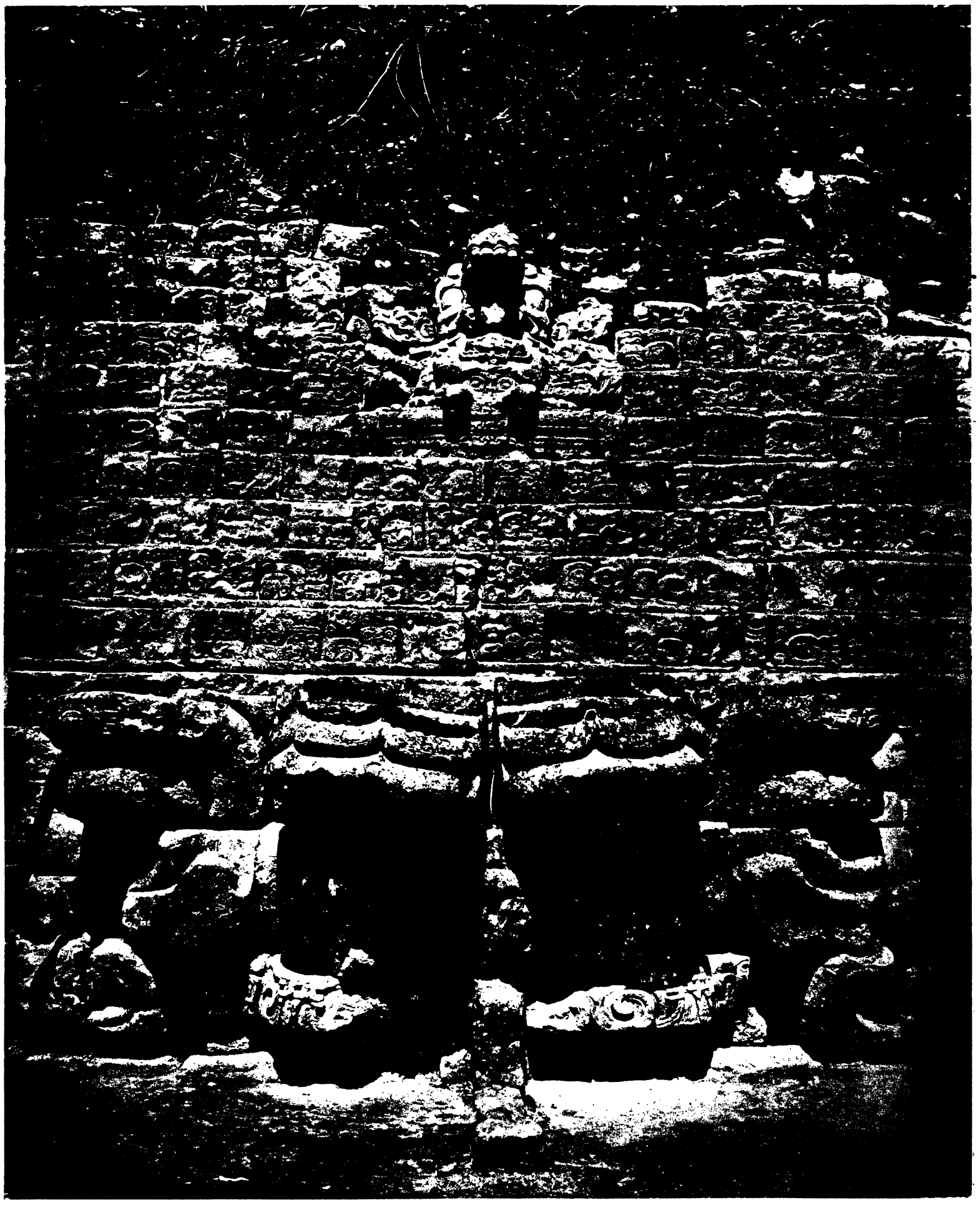

MIDDLE SECTION OF LOWER PORTION OF STAIRWAY, SHOWING ALTAR AT BASE AND SEATED FIGURE ABOVE.

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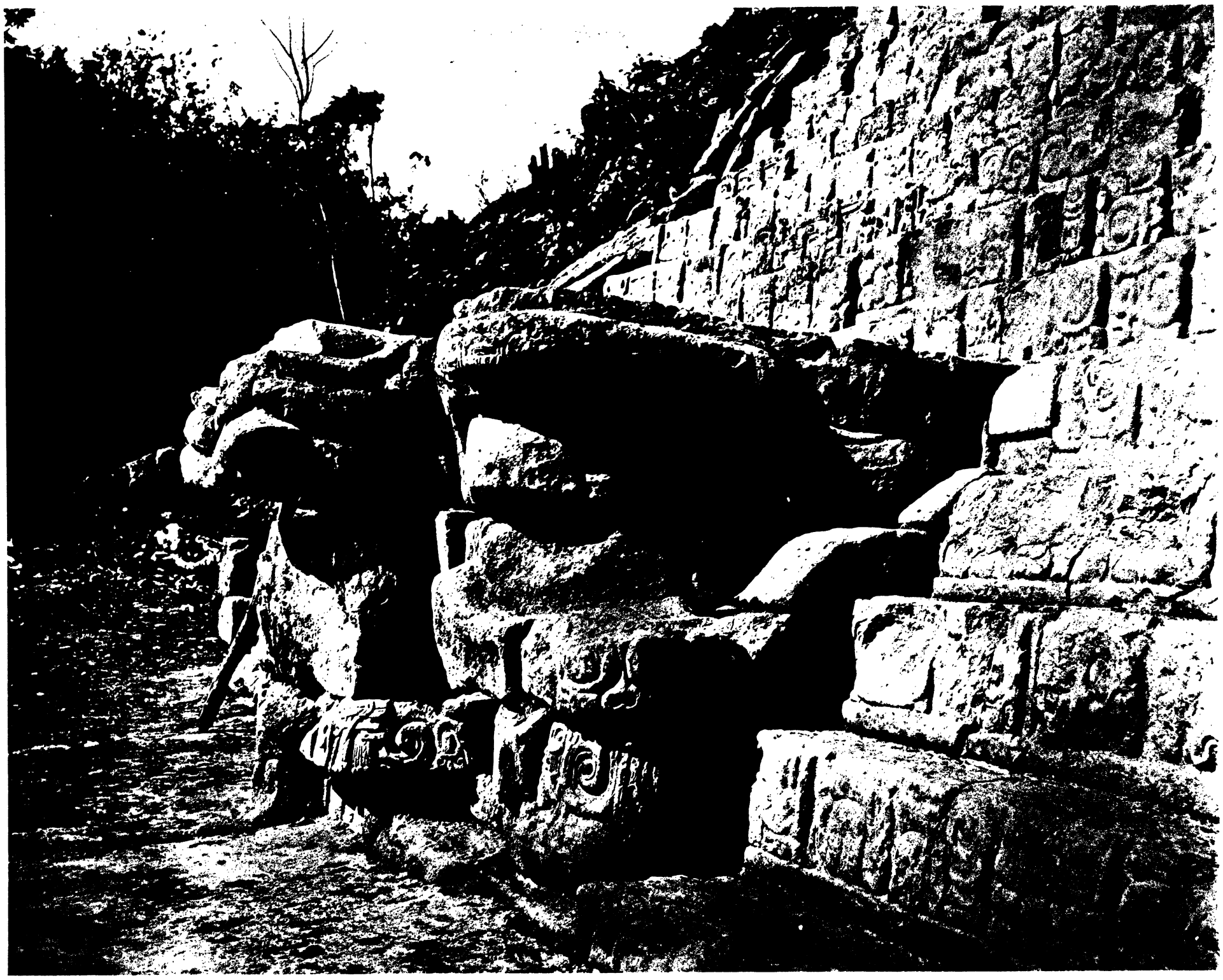

ALTAR AT BASE OF STAIRWAY.

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1

2

DETAILS OF ALTAR AT BASE OF STAIRWAY.

1 SOUTHERN HALF. 2 NORTHERN HALF.

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SEATED FIGURE ABOVE THE ALTAR.

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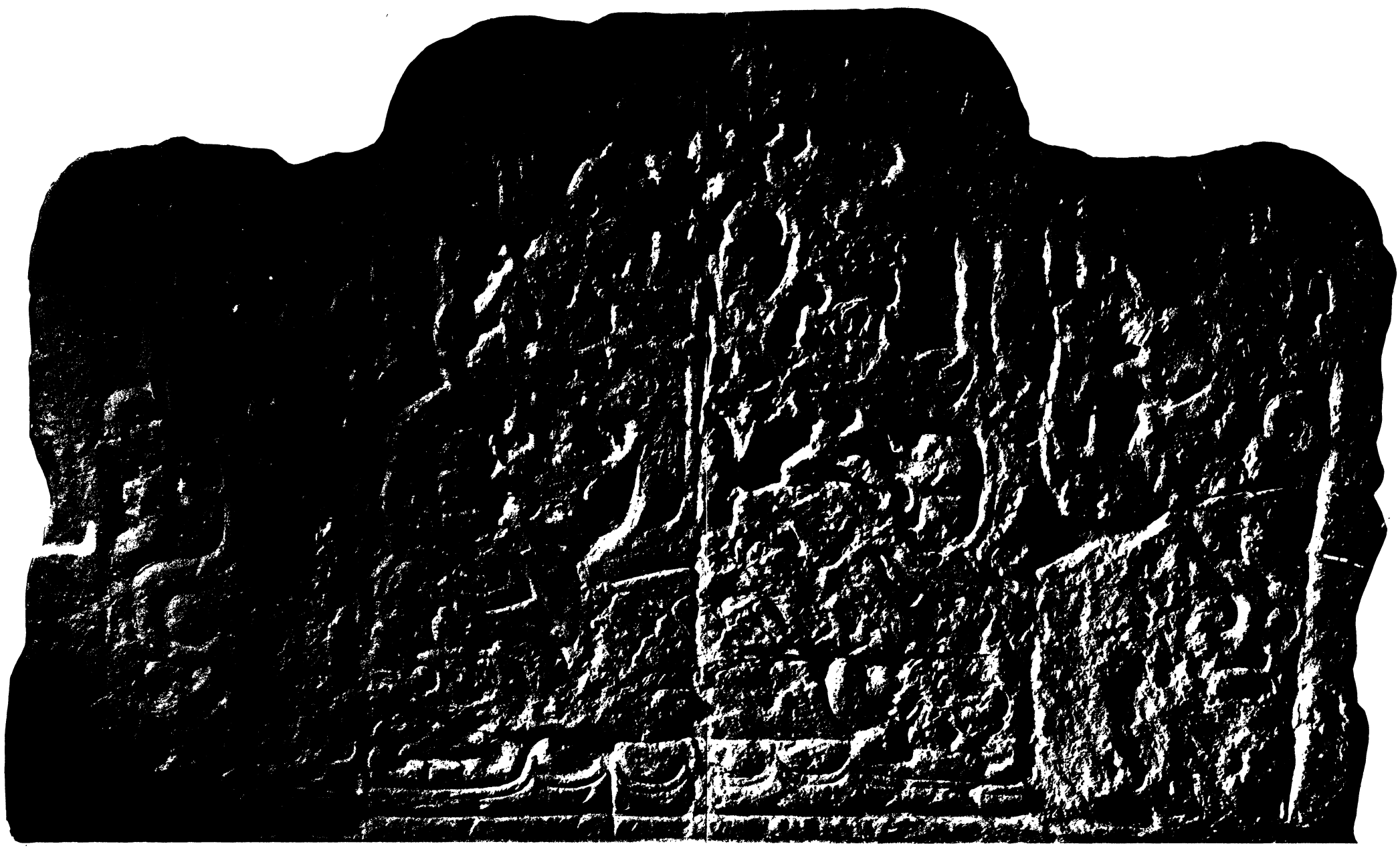

TOP OF ALTAR AT BASE OF STAIRWAY.

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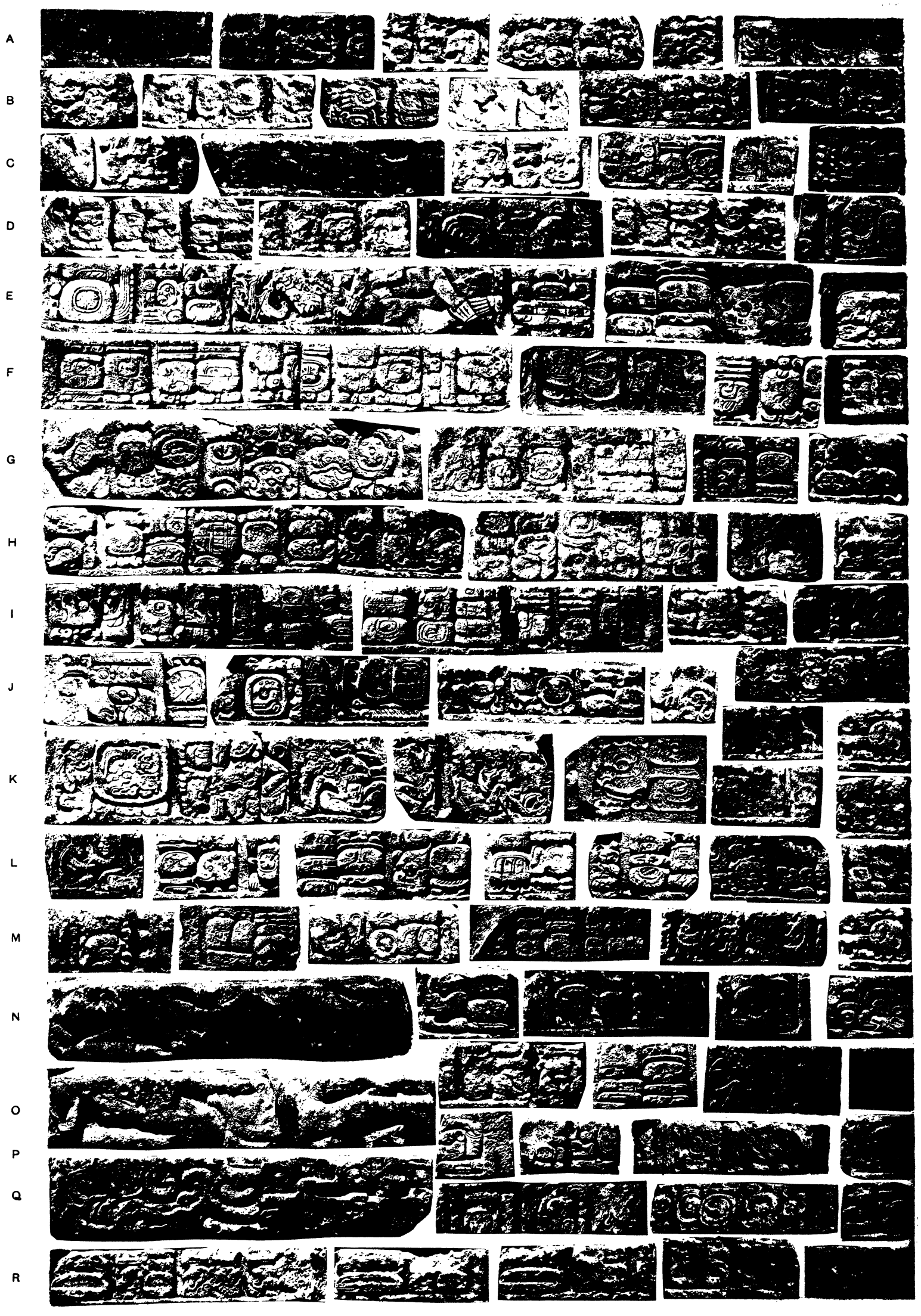

DISCONNECTED FRAGMENTS OF THE INSCRIPTION.

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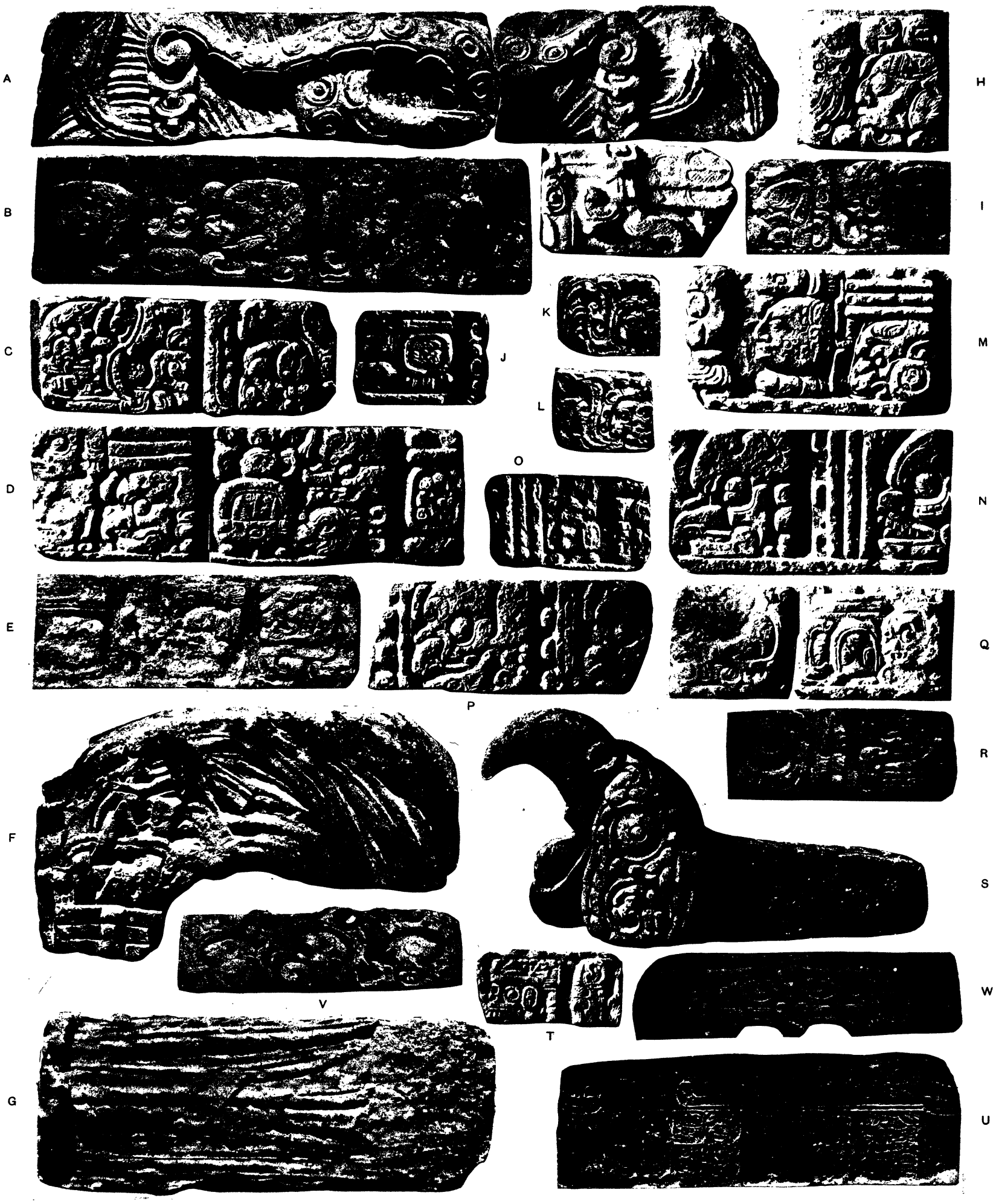

FRAGMENTS OF THE INSCRIPTION AND OTHER SCULPTURES FROM THE STAIRWAY.

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ONE OF THE SEATED FIGURES FROM CENTRE OF STAIRWAY.

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SCULPTURES FROM HIEROGLYPHIC STAIRWAY.

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1

2

3

STELA M.

1 UPPER PORTION OF STELA. SIDE VIEW. 2 BACK OF STELA. 3 FRONT OF STELA.

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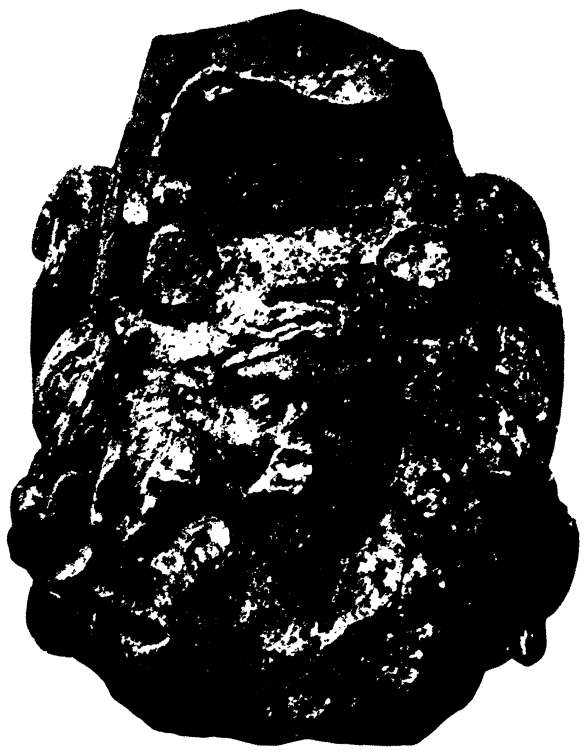
1



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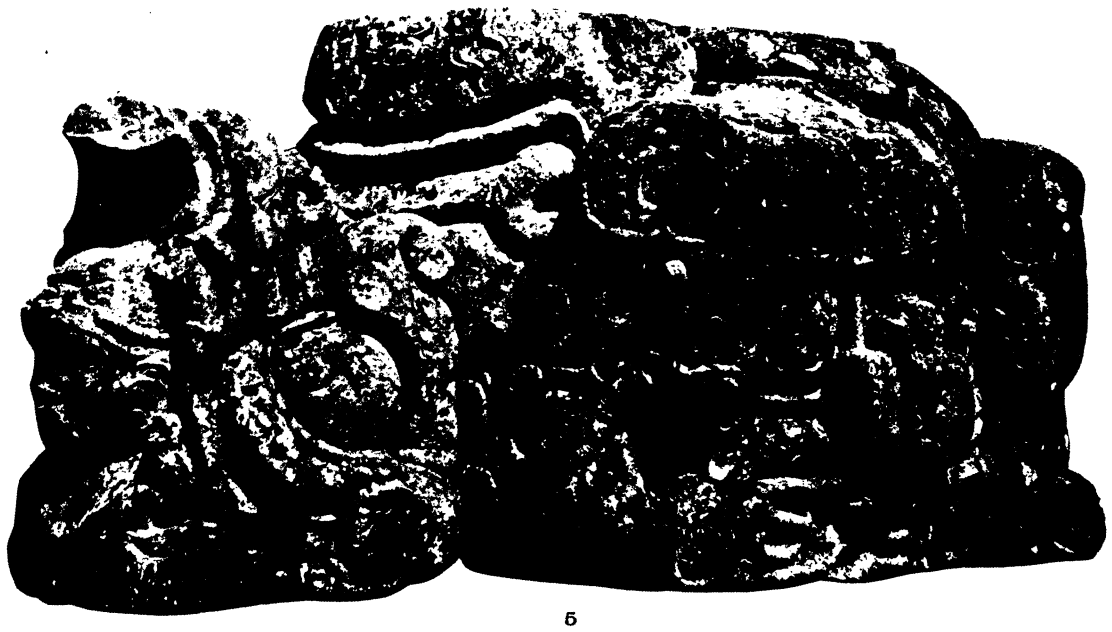

5

ALTAR OF STELA M.

1 NORTH HEAD, SIDE VIEW. 2 NORTH HEAD, FRONT VIEW. 3 SOUTH END OF ALTAR WITH HEAD IN PLACE.
4 NORTH END OF ALTAR WITH HEAD IN PLACE. 5 VIEW OF ALTAR LOOKING SOUTHEAST.

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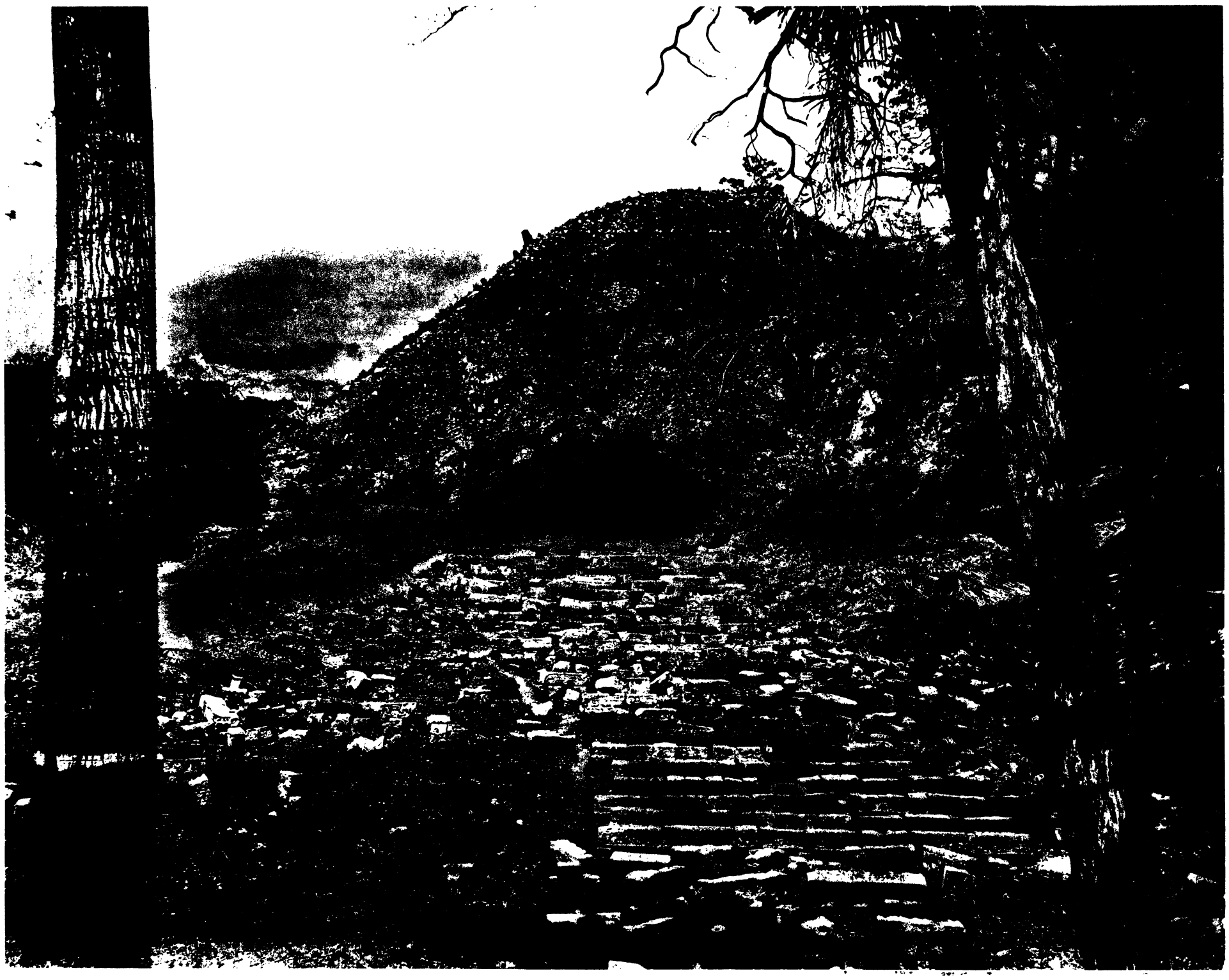

MOUND 26 AFTER EXCAVATION OF STAIRWAY. SCULPTURES FROM DÉBRIS OF STAIRWAY IN FOREGROUND.

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Continued from page 2 of Cover.

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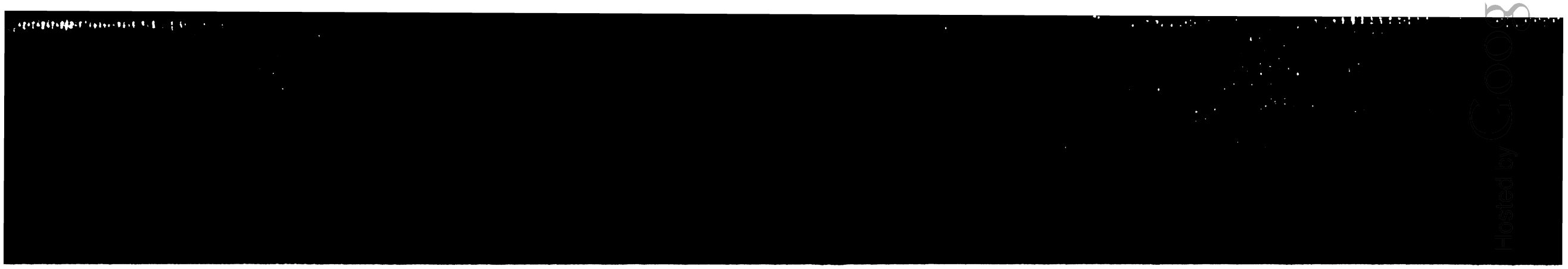

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